DOCUMENT RESUME

ED 255 902 CS 008 023

AUTHOR Stevenson, Jennifer A., Ed.
TITLE William S. Gray: Teacher, Scholar, Leader.
INSTITUTION International Reading Association, Newark, Del.
REPORT NO ISBN-0-87207-967-8
PUB DATE 85
NOTE 84p.; Funding provided by a grant from the W.S. Gray Family: Mrs. William S. Gray, Jr.; William S. Gray, III; and Grace W. Gray.
AVAILABLE FROM International Reading Association, 800 Barksdale Rd., PO Box 8139, Newark, DE 19714-8139 (Book No. 967, $3.50 member, $5.00 nonmember).
PUB TYPE Books (010) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Beginning Reading; *Educational History; Models; *Reading Instruction; *Reading Research; Reading Tests
IDENTIFIERS *Gray (William S)

ABSTRACT

William S. Gray, first president of the International Reading Association, is the focus of this booklet. Sections are devoted to "The Person," which includes Gray's family background, early schooling and teaching jobs, and his further education at Illinois State University, the University of Chicago, and Teachers College (Columbia University); and "The Scholar," which includes contributions Gray made to reading, such as standardized oral reading tests, studies on diagnosis and remedial instruction, school surveys, major studies outside the United States, adult reading research, summaries of investigations and practices, and a model of reading. Approximately half of the booklet is comprised of a 519-item bibliography of the writings of William S. Gray. (DF)

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William S. Gray: Teacher, Scholar, Leader

edited by
Jennifer A. Stevenson

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Library of Congress Cataloging in Publication Data
Main entry under title:

William S. Gray, teacher, scholar, leader.

Bibliography: p.
1. Reading—Bibliography. 2. Gray, William S. (William Scott), 1885-1960—Bibliography. 3. Gray, William S. (William Scott), 1885-1960. 4. Reading, Teachers of—United States—Biography. 5. Teachers—United States—Biography. I. Stevenson, Jennifer A. II. International Reading Association.
Z5818.L3W54 1985 [LB1050] 016.4284 85-2465
ISBN 0-87207-967-8

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William S. Gray: Teacher, Scholar, Leader

edited by
Jennifer A. Stevenson

Supported by a grant from the W.S. Gray family:

Mrs. William S. Gray, Jr.
William S. Gray, III
Grace W. Gray

1985
Published by the
International Reading Association Newark, Delaware 19714

William S. Gray, circa 1955

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Foreword

William S. Gray was the first president of the International Reading Association. His accomplishments, however, made him far more than the father of IRA. He was also the father of Dick and Jane of the Scott, Foresman basal reading series, as well as a researcher who led the field in uncovering new aspects of reading and in attracting students who would also make contributions. It is appropriate that he is being honored by the publication of his bibliography and these retrospective articles on the occasion of the one hundredth anniversary of his birth.

The IRA Special Interest Group on the History of Reading was responsible for calling attention to this anniversary. Its chairperson, Miriam Balmuth of Hunter College, telephoned me while I was still the Executive Director of the Association to ask how Mr. Gray (as he was always called by his colleagues at the University of Chicago) might be honored at the 1985 IRA Annual Convention in New Orleans. Balmuth had been reminded by SIG members Earl Hanson and Nancy Mavrogenes (who was writing a biography of William S. Gray for her doctoral dissertation) that Gray had been born on June 5, 1885. It seemed fitting that IRA should remember the occasion. One possibility was at the Reading Hall of Fame meeting.

William S. Gray died just before the formation of the Reading Hall of Fame. The rules specified that only living persons could be elected to that body. This stricture is being remedied by the election of a small number of Honorary Members, and William S. Gray is one of those Honorary Members.

It was decided by the Reading Hall of Fame membership that their cosponsored program at the 1985 IRA Annual Convention be devoted to the life and contributions of this scholar who had done so much to coalesce into a strong voice for reading two earlier organizations in the field, the National Association for Remedial Teaching and the International Council for the Improvement of Reading Instruction.

Leo Fay, as President Secretary-Elect of the Reading Hall of Fame, had the responsibility of drafting the program. He sought the help of many people, including members of the Gray family, William S. Gray's former students at the University of Chicago, executives of Scott, Foresman and Company, and members of the Special Interest Group on the History of Reading. This monograph, entitled *William S. Gray: Teacher, Scholar, Leader*, includes the papers presented at that program on May 9, 1985 and also reproduces the bibliography of Gray's writings. The original bibliographical notes are archived in the William S. Gray Collection in the University of Chicago Library.

The Reading Hall of Fame gratefully acknowledges the financial contribution of the Gray family which made this publication possible. It is also indebted to Scott, Foresman and Company which, with the assistance of members Earl Hanson and Nancy Mavrogenes of the IRA Special Interest Group on the History of Reading, mounted an exhibit in the convention exhibit area in honor of Dr. Gray. Scott, Foresman also provided the refreshments for this centennial birthday party.

William S. Gray: Teacher, Scholar, Leader is a fitting memorial to the man who devoted much of his life to the improvement of reading, and to the people who teach reading throughout the world.

Ralph C. Staiger
President Secretary 1984-1985
The Reading Hall of Fame

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* Indicates persons elected to membership of the Reading Hall of Fame and the year elected.

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Preface

This book is a tribute to a remarkable man—a venerable scholar, an exemplary person, a distinguished teacher and leader in the field of reading education and research. This year 1985 marks the one hundreth anniversary of the birth of William S. Gray, Jr., and this volume, *William S. Gray: Teacher, Scholar, Leader*, is intended to be a remembrance and celebration of his life and work.

The volume is a result of the contributions of many people. The idea that there might be a book, a book with the purpose, content and authors of this one, was Leo Fay's. It was Leo Fay, President/Secretary-Elect of the Reading Hall of Fame, who first thought that a publication might accompany the May 1985 meeting of the Reading Hall of Fame Joint Action Group, a meeting held at the Thirtieth Annual Convention of the International Reading Association. Fay drafted the program for the May meeting, which was designed to honor William S. Gray, and then contacted the William S. Gray family for help with funding the related publication. Since then, it has been my pleasure and privilege to carry those plans for publication through to completion.

A few words about the content of the book may be helpful here. Nancy Mavrogenes writes of "William S. Gray: The Person." Her chapter is a captivating account of Gray's family history, his childhood, and his early professional training and career. Mavrogenes' chapter is a unique synopsis of the personal background and elements which contributed to the character of Gray the teacher and scholar. It is based on the author's dissertation work at the University of Chicago, the university where Gray taught, researched, and wrote for much of his professional life.

Helen M. Robinson, writes of "William S. Gray: The Scholar." This chapter aptly summarizes the voluminous professional writings and contributions of Gray, from 1909 to 1963. Robinson was a fellow teacher and researcher with Gray at the University of Chicago, and was named the William S. Gray Research Professor,

now Emeritus, at that institution. Therefore, she is well able to add a personal understanding to her full knowledge and summary account of Gray's teaching and scholarship.

The bibliography which follows the two chapters is intended to be a comprehensive listing of Gray's writings – professional articles and books, as well as instructional materials. The bibliography is a compilation of information obtained from several sources. The references to Gray's professional writings were found primarily within a set of bibliographic cards which Gray maintained personally during his life, cards which are now housed in the William S. Gray Collection in the University of Chicago Library. A few other references, works published posthumously, were added to those found on Gray's personal list. Last, the references and description of instructional materials authored by Gray were compiled from information provided by Scott, Foresman and Company. The fullness and variety of the bibliography are noteworthy – indeed, this educator and researcher was a prodigious and learned writer. And, as one reads, this book speaks for itself – of the life and work of an eminent, greatly respected, fondly remembered teacher, scholar and human being.

I would like to thank some of the many who helped with the development and completion of *William S. Gray, Teacher, Scholar, Leader*. Leo Fay and Ralph Staiger, of the Reading Hall of Fame Joint Action Group, and Ronald Mitchell, IRA Executive Director, provided valuable advice throughout, and it was Ralph Staiger who contributed both the title and the Foreword. The William S. Gray family – Mrs. William S. Gray, Jr., William S. Gray III and Grace W. Gray – generously donated monies to the Elva Knight IRA Research Fund to help with the cost of the project. William Pattison, of the Department of Education at the University of Chicago, and Kenneth Rahage, of the National Society for the Study of Education, kindly sent copies of Gray's personal bibliographic cards and gave permission for publication of that information here. Donald Robertson, head librarian at Scott, Foresman and Company, helped assure the accuracy of the references to instructional materials authored by Gray. And, finally, the staff of the Publications Division at IRA Headquarters should be recognized, especially those who contributed to the editing, design, production and printing of the book: Romayne McElhaney, Larry Husfelt, Deborah George, Mauro DiReda, Eileen Zdrojewski, Jane Jones, Boni Nash, Prudence Blades, Iona Sauscerman and Beth Doughty. Clearly, this publication is a result of the efforts of many people. I have been fortunate to participate in its development and in its tribute to a remarkable teacher, scholar, leader.

Jennifer A. Stevenson
Director of Publications
International Reading Association

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William S. Gray, circa 1930

Nancy A. Mavrogenes
University of Chicago

WILLIAM S. GRAY: THE PERSON

William S. Gray—teacher, author, administrator, officer and member of professional organizations, organizer of conferences, developer of the first important reading test, summarizer of research, creator of the most widely used basal readers, pioneer in diagnosis and remediation, adult reading and content area reading—was the primary figure in the development of reading into a specialized, scientific, and respectable course of study. Called by Jeanne Chall (12)* the "acknowledged leader of, and spokesman for, reading experts for four decades," identified by doctors in reading as the most influential person and best researcher in the field (148), still listed among the ten most frequently cited authors (40). Gray collected a host of awards: a professorship and research collection named after him (the William S. Gray Research Professorship in Reading at the University of Chicago and the William S. Gray Research Collection in Reading), a citation of merit awarded in his name (the William S. Gray Citation of Merit, awarded by the International Reading Association), and the title "Mr. Reading" officially bestowed on him (also by the International Reading Association). Thus the life and work of this man, based on a solid reputation built from varied accomplishments, would seem to be worthy of study. It is the purpose of this paper to explore the beginnings of William S. Gray, the formative experiences which contributed to the making of this important twentieth century educator.

* The reference numbers within this chapter refer to the references which are listed and numbered at the end of the chapter, on pages 17 to 23.

Family Background

Isaac and Sarah Gray. Isaac Gray and his wife Sarah, both from the Isle of Wight, England, came to the United States in 1830. In England Isaac had been bailiff on a large estate which raised stock. His wife was from the noted Hawkins family, shipbuilders in Portsmouth, and probably had some education, since she taught school when she first came to the United States. Settling first in New York and then Indiana, Isaac and Sarah moved west in 1836, due to rugged conditions and trouble with Indians. Advertising literature which pictured Quincy as a growing town attracted the Grays to western Illinois (44, 147). Adams County was a typical rural agricultural county in the middle of the Corn Belt, a prime area for fattening cattle (114, 118).

The Grays were able to buy 160 acres of land in a military tract 19 miles east of Quincy, on the edge of the town of Coatsburg. There they settled in a primitive log cabin, in the company of wolves and foxes, and raised seven children. Because of training in England, Isaac became a stock farmer and the first veterinarian in the county. Both Grays became involved in local institutions and were active in the Methodist Episcopal Church and in establishing the first crude log cabin schools in the 1830s and 1840s (44; 45, March 31, 1983; 127; 147). One might suspect that Sarah, once a school teacher herself, was especially involved in forming these first schools, since the position of women on the frontier was comparatively elevated, particularly in matters of education and religion (16). Schools were seen as instruments of social mobility, the means of preparation for civic duties and a chief agency of moral training and discipline (34, 122). Thus an involvement in education, an interest in civic progress and a tendency toward professionalism were evinced by these first Grays on United States soil.

Richard Gray. Isaac and Sarah Gray's oldest son was Richard, who took over the old homestead. In addition to farming, he held various local offices, was active in the Methodist Episcopal Church and was a stockholder of the railroad built through Coatsburg in 1855, which helped to increase the town's prosperity by making it a shipping point. A temperate and conservative man, Richard Gray had four sons by his second wife. Two of these sons were named after national figures: Zachary Taylor Gray named after the United States President of the time and William Scott Gray, born February 15, 1855, named after the commanding general of the United States Army, Winfield Scott (45, January 7, 1983; 55; 71; 127; 147).

William Scott Gray, Sr. Young W.S. Gray, Sr. attended Coatsburg's third school, a typical one room school built in 1854-1855. At the age of 18 he went on to the nearest high school, Maplewood High in Camp Point four miles to the east. This school offered a standard curriculum of mathematics, science, Latin and rhetoric, as well as a four week normal course for those who wanted to teach (71). Taking advantage of his family's upward socioeconomic movement, young Gray followed the usual path for ambitious rural youth – he attended the nearest of the ubiquitous normal schools to prepare for teaching school. Abingdon College, near Galesburg, was typical of the small denominational "colleges" founded in a

"veritable epidemic" before the Civil War "in the most unlikely places" to enhance local pride and continue the Puritan effort to transfer cultural models into the wilderness (2, p.134; 14, 82, 94, 120). Abingdon offered three courses: classical, Biblical, and preparatory, which included two "education" courses (26, 72, 113).

After Abingdon, William returned to Adams County and taught there for 30 years. Most of this time he was teacher and principal of the same Coatsburg School he had attended, although the school was by then enlarged to two rooms (127). Better qualified because of his normal training than the vast majority of Illinois public school teachers, "Professor" Gray was soon noted as a "young man of superior talent" who was raising the standard of his school (82; 131, August 1882, p. 119, November 1883, p. 178). One of his main activities was conducting and instructing Adams County teachers' institutes (131, June 1882, August 1883, May and September 1884, June 1887). In 1894 he also attended and enthusiastically reported on a three week institute at Illinois State Normal University (ISNU), which was at the time a very active center of North American Herbartianism (61). As a teacher Gray was described as a man of high ideals who recognized and encouraged the strong points of his pupils and who kept strict order in his classroom. He served on several Adams County Boards of Education, ran as Republican candidate for County Superintendent of Schools and served on the State Educational Commission. Two of his sisters were also public school teachers (71, 147, 149).

Although education was a primary activity of William S. Gray, Sr., he had other interests. In 1906 he built Coatsburg's grain elevator and in 1910 he organized the Farmers and Merchants Bank in Coatsburg. He was a steward, trustee and adult Sunday school teacher in the Methodist Episcopal Church. In addition he was interested in politics, holding office as assessor, justice of the peace, member of the Constitutional Convention of 1920 and Republican State Senator 1921-1923. While Senator, he was a member of committees on agriculture, county and township government, and education (35; 45, November 30, 1982; 99; 147). The five volumes of the 1920 Constitutional Convention *Proceedings*, edited by Gray and two colleagues, show Senator Gray as a staunch defender of democratic principles, a self-proclaimed expert on language and punctuation and, primarily, a defender of education, arguing for the support of state normal schools and urging boards of education to stand behind employees subjected to criticism.

On September 11, 1879, Gray married Annie Letitia Gilliland, daughter of Dr. W.E. Gilliland, a prominent physician and surgeon of Coatsburg and member of an old Adams County family which had been active in local government, church work and fraternal organizations (15, 115, 147). After their marriage the Grays settled into a large Italianate-style house on the western edge of Coatsburg previously occupied by Dr. and Mrs. Gilliland. This two story, eight room house with large porches and a large tree-filled yard had been built from native lumber by a local sawmill owner soon after the Civil War (128). Solid, respectable, imposing, dignified, with large windows to let in sunlight, fresh air, and the pleasant view, the residence typified Victorian theory of what a house should be: a combination of genteel villa and utilitarian farmhouse, which revealed the class of its occupants

and symbolized the domestic values of security, trust, and family bonds (151).

Significant Patterns. These three generations of Grays and Gillilands seem to have been typical of the nineteenth century American character which is at the heart of the history of the United States (16). Symbolizing this land of opportunity as each generation improved upon the preceding one, these families had from the beginning a sense of civic responsibility, a desire to promote community welfare, a keen interest in education, a professional inclination and increasing activity in business pursuits. Nurtured in part by the lessons they had learned from the Webster Blue-Back Spellers and McGuffey Readers used in school and in part by the American environment with its spaciousness and optimism, these two families developed the personal characteristics of temperance, ambition, persistence, diligence, resourcefulness, intelligence, responsibility, caution with innovation, individualism with cooperation, a belief in high ideals and democratic principles, and a desire to improve their world and abide by its laws. As they advanced through the decades, with expanding income and education, toward a middle-class respectability representative of the American dream, their values were those which rose with the nation's industrialism and which tended ultimately toward professionalism and the legitimation of the university: good citizenship; hard work; orderliness; practicality; efficiency; faith in one's own talents, in God, and in the American way; and an absolute faith in education (5).

Another important point is that this family background was typical for a professional scientist. Two studies in the 1950s examined the backgrounds of scientists, one including social scientists (121) and the other including psychologists (93). The Middle West – with its frontier ideology and respect for pragmatic and successful innovation, individualism and fluidity of social organization – was the most productive area for scientists. The usual religion was liberal Protestantism, which encouraged thrift, sobriety, self reliance, rationality, a democratic ideology and material values most compatible with science. Rural middle class was the most predominant socioeconomic group, a group which believed firmly in individual enterprise, intellectual values, fluid social mobility, and egalitarianism. The rural middle class was free of traditionalism, and the limited range of vocational choices enabled this group to see in science the possibility for advancement in social and economic status. As the nation moved from an agrarian to an industrial society in the nineteenth century, as the educational system consequently expanded and changed, and as science was rising as a profession, a pattern was set for William Scott Gray, Jr. a rural, middle-class Protestant from Coatsburg, Illinois.

Early Schooling and Teaching Jobs

Growing Up in Coatsburg. After marriage in 1879, "Professor" and Mrs. William S. Gray, Sr. settled into their large house which soon became known as "The Gray Mansion." Four children were born in that house: Lillian, who became a high school English teacher; Edward E., who established a lumber and grain

business in Colorado; Russell, the youngest, who died in infancy; and William Scott Gray, Jr., the third child and second son born June 5, 1885 (45, November 17, 1982, 147, 149). These children were raised in the affectionate atmosphere of an extended family. Their mother was efficient, lighthearted, hardworking, religious and civic-minded, their father a figure of some stature in the small community. Young Will loved to visit his numerous relatives in the area and is remembered by old-timers in Coatsburg as a helpful and serious boy, one for whom his parents' main goal was that he become "a big man" (36; 45, March 31, 1983).

The children's immediate environment was about a dozen acres, which included a large yard, huge garden and pasture. There were cows, chickens, an old barn, an outhouse, a basement kitchen and rocking chairs on the front porch to be used when the chores were finished (43; 63, February 14, 1984; 128). The larger environment was Coatsburg, in which there were never more than 300 residents, but which was a genuine "one little part of America" (127). It was a community always interested in sports and civic progress, and in the 1890s it supported four churches, two hotels, two doctors, several community bands, a series of saloons and the usual variety of stores and small businesses. A center of the town was the railroad depot with stockyards and a platform for loading grain and livestock. The streets were well planted with trees. It seemed the perfect place for a boy to grow up – trailing his feet in the soft dust of the dirt roads, climbing the rail fences with tall hedges, helping or pestering the lamplighter as he lit the kerosene lamps on each streetcorner, harvesting the apples in the fall in neighboring orchards when the air was full of the fragrance of the fruit and the smoke from wood burning stoves (127).

Schools. All the Gray children attended the local school, where their father was principal. This two story brick building of four rooms, opened in 1880, was just across the railroad tracks from the Gray house (127). By his own account, Will Gray finished elementary school at the age of 13 and then continued on in the same school (in "advanced subjects") because there was no high school in Coatsburg (54). Such an extension of an elementary school was typical of the time, especially in the western states (34). At the age of 15 Will went on to Maplewood High, a school which his father had attended, and one which was becoming a prominent educational center because it furnished Adams County with about one-half of its teaching force (147).

Around the turn of the century Maplewood High attracted students from all over the country as an up-to-date school. It had a library of 400 volumes for its 60 or 70 students and was "partially accredited" by the University of Illinois (75; 97, October 26, 1904; 147). According to his transcript from the University of Chicago, Gray took a large number of courses in mathematics and the sciences. Walking the four miles between Camp Point and Coatsburg twice a day, even in winter snow (63, February 14, 1984), Gray completed the four year high school course in three years and, along with nine classmates, received his diploma on May 6, 1904 at the eighteenth annual commencement in the Camp Point Opera House. According to the local newspaper, Will Gray gave a commencement oration,

probably his first public speech, which was "full of good thoughts." The speech was entitled "Elements of Success," and these were specified as a healthy organism, self-reliance, perseverance, will, and patience to labor and wait (97, May 18, 1904). These values were those on which William S. Gray based his entire life.

Early Teaching Jobs. Gray's brief autobiographical piece (54) is the source of much of the information available for the years between 1904 and 1908 when he was a public schoolteacher in Adams County.

> Upon graduating from high school I was faced with the problem of deciding upon my plans for the future. I had aspired in a sense to become a lawyer. Funds were not available to send me to college (his father was still a schoolteacher) and as a result I began my professional career in a rural school where I taught for one year. It was an interesting coincidence that my father had also taught his first school in the same district, many years before.

Will Gray had little trouble finding a job, since in those days most rural teachers in Illinois country schools were not even high school graduates (66). Young Gray's first post, when he was just 19, was at Adams County School #132, the Hazelwood School in Columbia township a few miles southeast of Coatsburg (64, 130). As the local newspaper reporter jokingly noted, W.S. Gray, Jr. "will become regent of the Hazel Dell University in Columbus township" on September 5, 1904 (13). The Hazelwood School was a small, typical, one room country school, rectangular in shape, with windows on the longer sides, a belfry above the door in the middle of a shorter side, and with an enrollment of about 15. Will, like his father, had the reputation of being a strict disciplinarian and was much respected (3; 41; 45, March 31, 1983). His salary was about $400 for the school year, at a time when factory workers were earning about $548 for a full year and bricklayers $7[illegible] (75).

Instruction in those days was primarily rote recitation, memorization, and drill, with emphasis on reading, arithmetic, writing and spelling. There was no differentiation of instruction, and for reading pupils merely took turns reading orally. Books to read were chosen by adult standards (3, 41, 52, 53, 56). In his autobiographical piece, Gray called this first teaching experience "a very illuminating one." It gave him an opportunity "to study the problems of teaching at all levels," since his students varied in age from 5 to 21 (the teacher being a mere 19). He felt that this work was "reasonably successful" in the content subjects but "distinctly unsuccessful" in teaching reading. He concluded, "I am sure that keen interest in this field was stimulated during this year in the rural school" (54). One can imagine that such a teaching job for a young man just out of high school and with no practical experience was difficult and discouraging. The problems were numerous: managing pupils with an age range of 5 to 21, scarce equipment, unstandardized textbooks, an uncomfortable room, high absenteeism. However, these small country schools made great contributions; they brought scattered farm families together in a common effort and reduced illiteracy in the north central states from 9.3 percent to 4.2 percent during the years from 1870 to 1900 (41).

Around the turn of the century teaching in a country school was viewed by ambitious young men as an avenue to higher things (41, 96). So it was viewed by young Gray. Better trained teachers were quickly employed by the village and graded schools, in which conditions were more favorable and salaries higher than in the country schools, especially for men (144). Gray was not only a graduate of a prestigious local high school but also, spurred on by either a felt inner need or the suggestion of his county superintendent, had attended a summer session in 1905 at Illinois State Normal University (59). Therefore, in the fall of 1905 Gray took his first step up. From 1905 to 1908 he was principal and teacher of grades five through eight in Fowler, a "little hamlet" with "three churches, a few stores, a good village school, and other evidences of a modest rural life," about six miles west of Coatsburg (147, pp. 635-636). Gray taught his 30 to 40 pupils in the upper room of a two story frame school building. In addition to teaching four grades, the young teacher also offered a special course for a few students who had finished eighth grade, in order to help them pass the teacher's exam (42, 73). Gray said that he found these three years of teaching in a village school also "very illuminating. I had an opportunity to study more intensively the problems of the middle and upper grades" (54).

Illinois State Normal University

Normal in 1908. Gray continued in his autobiographical piece (54), "At the conclusion of my third year as principal I decided to make education my life work. Accordingly, I attended the Illinois State Normal University for two years, receiving my diploma in 1910." Founded in 1857, ISNU was the first state normal school in the Mississippi Valley and by the late nineteenth century had become the largest and most respected normal university in the country (66). Under its bright, energetic, and dynamic sixth President, David Felmley, its summer school had grown from an enrollment of 446 in 1900 to 1,000 in 1906 and its electives from 20 in 1900 to 90 in 1910 (66, 92). Its faculty was called by Frank McMurry "remarkably conscientious, energetic, and able" (104). But the most significant fact about ISNU is that it had been in the 1890s the center of the North American Herbartian Movement. A group of men who at various times studied or taught at ISNU – including Charles De Garmo, Frank and Charles McMurry, C.C. Van Liew, Edmund James, Elmer Brown, and John Hall – had all been students in Germany in the 1870s or 1880s and had brought home a new outlook on teaching. The new outlook was based on the ideas of German philosopher Johann Herbart which, when translated and reformed into North American terms, caused a "revolutionary ferment" and "marked change" in United States education (3, 32, 66, 67, 82, 98, 103).

In contrast to nineteenth century teaching in American schools, which was formal, pedantic and authoritarian and which used, in the name of promoting mental discipline, subject matter chosen by adult standards and a curriculum far removed from actual life, Herbartianism offered new ideas for a rapidly changing

country (32, 106, 107, 123, 134). Teaching was broken down into five steps: preparation, presentation, association and comparison, generalization, practical application. According to Herbart's theory of apperception, new ideas are interpreted in connection with old ideas; therefore, teaching must start with what the child knows. The emphasis must be on inductive methods – teaching through problems and projects – not on drilled facts to be accepted without question. Children should realize their potential and become good citizens through their own activities, and above all must be interested in their studies, which should pertain to their life as much as possible. According to the "culture epoch" theory, one period or era appropriate to the child's stage of development should be taught thoroughly, and it should be taught through the correlation of subjects and the selection of typical topics rather than through the gathering of encyclopedic knowledge (3, 7, 24, 25, 66, 70, 101, 144). The McMurry brothers offered eight laws as guides to teachers: the laws of induction, apperception, ethical aim, self activity, absorption and reflection, motor activity, interest, and correlation (102).

Along with the ideas of Pestalozzi, Froebel, the Child Study Movement, John Dewey, Francis Parker, Lester Frank Ward, and William James, Herbartianism was very much a part of the "hotbed of pedagogical discussion" in the United States around the turn of the century (107). Of all the ideas in the air, Herbartianism offered one of the most possible and potent ways of bringing the schools together with the times. By combining philosophy, observation, experience and experiments, this movement was eminently practical and clear. It provided a thoroughly designed curriculum with principles for its selection, as well as a systemized procedure for teachers and answers to questions about the nature of children, the purpose of education and the psychology of learning. Herbartianism offered a new conception of the importance of the teacher, emphasizing that teaching requires skill and that professional subject matter has a technique. It recognized the child as a developing organism – utilizing the experience of the child in selecting material, adapting materials to the interests and capacities of the child, beginning lessons with what the child knows, and selecting and organizing subject matter around meaning and in terms of actual life needs. It introduced new subjects into the curriculum and presented new conceptions of teaching old subjects, emphasizing a social point of view and a moral aim. It appeared scientific, bore the weight of German scholarship, and offered ideas for both theory and practice (7, 22, 31, 66, 69, 70, 91, 103, 105, 144). Therefore, in the 1890s, Herbartianism spread "like wild fire" in a "tidal wave of reform" over the United States, taking hold particularly in the normal schools of the upper Mississippi Valley and most particularly at Illinois State Normal University (67, p. 124). What it contributed to American education was considerable: a psychology of growth, the importance of problem solving and application, a first "scientific" approach to the study of education combined with a humanistic concern for both child and teacher, a coherent system of instruction, and a stirring up of educational thought (22, 28, 30, 31, 103, 105, 107).

Gray at Normal. When Will Gray arrived at Normal on September 7, 1908 to begin the fall term, the campus was beautiful, with its 100 species of trees and

the flowering shrubs and climbing vines planted after the great storm of 1902 (78, 98). There were tennis courts, baseball fields and three buildings: Old Main, the original college building where most of the classes were held; the Old Gymnasium (Cook Hall), which also housed the library and the science department; and the Old Training School. The Manual Arts Building, with its large new auditorium, was in the process of construction (58, 75). A staff of 51 teachers serviced a student population of 1400. Gray's own class, 1910, consisted of 52 women and 28 men (76, 77). Will Gray fit in as a typical student of the time: self-supporting, industrious, persevering, attentive, aware of the value of time and opportunity, having some teaching experience, and in age somewhat over 20 (110). ISNU students, mostly from rural areas, were known to be above average in ability and accomplishment (105). Many of them, like Gray, were receiving free instruction because they had signed a pledge to teach for two years in Illinois public schools (59).

Gray entered into campus life with the energy characteristic of his entire career. The two year course for high school graduates required 25 credits over seven terms, but he amassed 43 credits over the same period, including at least 12 "graduate" or college level courses. He took nine courses in education/psychology, eight in both English and mathematics, six in both social science and science, and three in art, as well as chorus, public speaking, physical training, three quarters of practice teaching and a senior theme (59). His overall grade average was 87.1, a low A and a creditable showing. As he later explained, grades over 85 were reserved "for people who show unusual ability" (51). He was also active in many other areas than the academic. He was President of the YMCA, acted in several plays, debated frequently in meetings of debating societies and in larger contests, was named as one of the "model men of the school," and even appears to have had an effect on the women (79, 81, 109, 152).

Gray's main extracurricular activity at Normal was oratory, which was, along with athletics, the center of the school's social life (98). For centuries, literary and debating societies had been an important part of American college life (116). At Normal they were especially important, since President Felmley thought that public speaking was essential for teachers. All students were required to take a rhetorical class until their instructor approved their application to an oratorical society. There were two oratorical societies at Normal, the Philadelphian and the Wrightonian, both founded within a year after the opening of the university in 1857 (92). The audiences at the programs of these societies habitually numbered in the hundreds, and the contests involved much excitement and furor, even rowdiness and fighting (98, 152).

Gray must soon have distinguished himself in oratory, for by October 20, 1908 the school newspaper reported that he had been unanimously elected as Wrightonian orator in the forthcoming Inter-Society Contest, because of his "good voice" and "pleasing manner" (80, p. 5). For this contest he prepared a speech entitled "Society and the Delinquent," a speech which was inspired by an incident which stirred up Adams County and the entire state in January 1908. In that month the body of William Ham(b)lin had been returned home to Quincy from the Pontiac

State Reformatory, after the dying youth had told his mother that he had been fatally injured by a guard (11, 37). In his speech, Gray railed against the current punitive measures, pled for more sympathy and judicial reform, and asked "for a fair chance for every boy whose buffeting and temptations have been too hard for him to overcome" (47, pp. 7-8). It was a speech full of persuasive oratorical devices, careful organization and writing, idealism and compassionate feeling for the underdog, and knowledge of recent studies of the nature of children, prison theory and the history of criminal punishment.

With this speech polished and re-polished, Gray became a big man on campus, winning the Inter-Society Contest in December 1908, the annual contest for the Richard Edwards Medal in Oratory in February 1909, the Inter-Normal Contest in March and, finally, the Annual Oratorical Contest of the Inter-State League in May. During these contests Gray was carried about the campus in processions and cheered on incessantly; he also was given the opportunity to travel to Cedar Falls, Iowa and to publish his first articles (46, 47). The accounts of his victories applauded his sincerity, noting his deep involvement in his topic, his simple and clear delivery, the musical quality and flexibility of his voice, the "vigor and finish of thought, language, and presentation" and, most of all, his hard and persistent work (65, pp. 6-7; 95; 119; 150). In his own account of the Inter-State Contest, Gray made fun of himself with quiet humor and expressed his great sense of pride in his accomplishments (46).

The Normal Training School. The day before his graduation from Normal in 1910, Gray, called a "brilliant" member of the class, was appointed training or critic teacher and principal of Normal's practice school (17). He was reappointed for a second year because he had rendered "excellent" service (76). Since President Felmley, like all Herbartians, considered this model practice school the most important feature of the institution, each Normal student was required to practice teach for three terms. The practice teaching included daily class instruction, as well as observation, discussion, and criticism from critic teachers and fellow students. The training teachers supervised student teaching, monitored lesson plans, discussed observations, and taught illustrative lessons (66, 78). Critic teachers had to be unusually qualified – able to teach well, analyze teaching in order to describe and discuss it, and direct young teachers with tact and discretion (88). As principal of Normal's practice school, Gray directed 437 students in kindergarten through grade eight and 118 student teachers (76).

An important result of Gray's work as the seventh grade training teacher was his first professional writing, a series of 12 articles on the teaching of geography presented in *The School Century* from May 1911 through June 1912 (48). This interest in geography undoubtedly stemmed from the three geography courses taken at Normal and from the Herbartian view of geography as the great comprehensive and integrative discipline for the study of mankind (24, 30, 66, 70). These 12 articles by Gray are pure Herbartian. They include the five formal steps of teaching (preparation, presentation, association, generalization, application), the notion of beginning with students' own experiences and interests, a desire to make

lessons practical and interesting, a recommendation for the correlation of subjects, the use of type studies and extended expression to engender clear thinking, and an emphasis on meaning, comparison, generalization, problem setting and problem solving. Other published geography units of the same period focus on the ideas of Francis Parker or John Dewey (68, 111) or on the old mental discipline (145). They are not Herbartian, like Gray's articles.

The ideas acquired in the Herbartian atmosphere of Illinois State Normal University stayed with Gray and contributed a humanistic streak and breadth of thought to his work. Gray's insistence on the primacy of meaning in reading instruction, on the necessity of interest and common experiences in his basal readers, on whole stories easy to read and varied in content, on a concern for the comfort and individual needs of readers, on functional and interesting drill in separate periods, and on the careful analysis of teaching procedures might all be due to his first experiences with higher learning. Normal gave this young teacher and scholar other valuable lessons as well. Gray's efforts in oratory and debating confirmed in him a habit of persistence and diligence, promoted qualities of analysis and criticism, taught him organization and clearness of expression, required logic and a feeling for audience, helped him acquire a pleasant voice and earnest delivery, and furthered a quickness of thought and a willingness to cooperate with others. His two years at the training school broadened his educational outlook to include the functioning of an entire elementary school, and taught him to teach well and to analyze the art of teaching. All these qualities became earmarks of Gray's later work as speaker, author, teacher, administrator, researcher.

The University of Chicago

Undergraduate Work. In Gray's autobiographical piece (54) the author rather dryly states:

> At the close of my second year as principal I decided to go forward with my education, taking my Bachelor's degree at the University of Chicago and my Master's at Columbia University. While in Chicago, I became inspired with the scientific spirit of the Department of Education and decided, if possible, to continue my work for the Doctorate.

There are several possible reasons for this step. One reason may have been Charles Judd, the prominent psychologist who was head of the Chicago Department of Education and who had twice spoken to Normal students about a month before Gray's Normal graduation. Gray must have been impressed by Judd, since Gray's commencement address, "The Educational Value of Generalized Habits" argued for generalizing classroom exercises to real life and for schools doing away with the useless. Both ideas were recurring themes in Judd's work (3, 18, 29, 84, 117). Judd's force of personality and imposing presence were well known; he had a stimulating effect on all whom he met (4, 39, 74, 100). There are additional reasons

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why Gray might have chosen Chicago: President Felmley had taught there during the summer of 1911 (141); 30 percent of the Normal faculty had studied there at some point (79); Normal had a tradition of pushing its graduates on to the great universities and colleges (66); and, the publication of 12 articles on his own teaching methods in a national educational journal may have provided the impetus to go on for more study. In any event, this was a crucial decision, because the University of Chicago was Gray's home for the rest of his life.

Gray began his undergraduate work at Chicago with the second summer term, starting on July 25, 1912 (59). He took a full load of two courses, both related to his current interest in geography: Physiographic Animal Ecology and Geographic Biology. During the following year he assumed a full load each quarter, including one zoology course, four botany courses, several German courses and three education courses. Education 71 (Introductory Laboratory Course in Experimental Education), which he took twice, probably introduced him to Charles Judd, since this course was Judd's specialty. Gray's grades improved steadily for an overall average of a high B. Granted exemption from practice teaching (on the recommendation of David Felmley) and granted 24 credits from his work at Normal, he received on June 10, 1913 the degree of Bachelor of Science in Education with a specialization in Natural Science, a course intended for those preparing to teach biological sciences in secondary and normal schools (59, 139, 140).

Graduate Work. Gray immediately continued on into graduate work. He was awarded an Honor Scholarship on June 9, 1913 for his "excellent scholarship" (142) and transferred to the graduate school on June 15 (59). In a busy summer when some education courses contained up to 150 students (141), he continued with a full load: a sociology course; a methods course with Samuel Chester Parker; and three psychology courses, two of them with Judd (59). During this time, his grades continued to improve (almost a straight A average), he was drifting toward educational psychology, and, especially important, he was working with Charles Judd. The power of such a contact and its growing influence have been described by both Guy Buswell (9) and Frank Freeman (38), contemporaries of Gray at Chicago. They noted Judd's "vigor," "directness" and ability to convey enthusiasm about his work so well that students in other departments were moved to transfer to education. Furthermore, at that time Judd was continuing the eye movement work he had begun at Yale and was attracting appropriations for laboratory studies in reading (87, 89).

After a school year away at Teachers College, Gray returned to Chicago in June 1914 as Assistant in Education, and in 1915 became Instructor. He taught the general methods courses, the courses on experimental investigations and supervision of teaching, practice teaching, and Introduction to Education with Judd. In addition, he took a full program of courses leading to the Ph.D., except for a lighter load in the spring quarters of 1915 and 1916. This program included five and a half credits in psychology and nine and a half in education; Gray's overall grade average was a low A. The education courses consisted of at least five courses with Judd. In 1916 Gray became Assistant Dean of the College of Education and on

May 27, 1916 he passed his final doctoral exam with education as the principal department and psychology as the secondary department. He graduated magna cum laude on the recommendation of Judd and was awarded the Ph.D. degree on June 6, 1916. His dissertation was entitled *Studies of Elementary School Reading through Standardized Tests* (59, 133, 139).

In addition to Gray's rapid progress through the doctoral program, his academic appointments on the teaching staff, and the honors for his final examination, there was a further indication of his success. On May 1, 1915 he was employed full time for six months to work on the Cleveland Survey, with Leonard Ayres of the Russell Sage Foundation as director and Judd as chief advisor (112). Gray became "inundated with work," visiting 400 recitations in 50 schools in less than a month (50). However, he was well aware of the invaluable opportunities. During this time he enlarged upon his dissertation by using his oral and silent reading tests, and worked with a very able group of colleagues. "My contact with this survey was one of the most interesting and inspiring experiences of my early professional career. It not only gave me a broader insight into the problems of public education, but it enabled me to study the habits of work and the modes of thinking of one of our keenest educational leaders" (54). With such a wealth of experience, Gray successfully adjusted to the University of Chicago, an institution called "a new species, a mutant," one which promoted with "an old-fashioned kind of fervor" concentration of effort, harder work "than at most Eastern universities," special stress on research and advanced work, and the advancement of knowledge above all else. The School of Education was described at the time as one of the most important branches of the university, with the largest enrollment of the professional schools and, among schools of education, the nearest rival to Teachers College both in size and reputation (129, p. 405, 425; 143, p. 276, 379).

Teachers College, Columbia University

A Year "Abroad." Gray continued in his autobiographical piece (54):

> I went to Columbia University during 1913 and 1914 and there came in contact with men such as Thorndike, Kilpatrick, Murray [sic], Strayer and others. The opportunity to sit as a student under the leaders in both the (Chicago) School of Education and Columbia University was an unusual one. It gave me an opportunity to compare points of view and to realize the great need for scientific studies of numerous educational problems. In selecting a topic for my Master's and Doctor's dissertations I was influenced largely by my early interest in problems of reading. Accordingly, under Dr. Thorndike I worked out a Master's thesis which ultimately resulted in the Standardized Oral Reading Paragraphs. I pursued the same problem for the Doctorate, enlarging upon it and making application of both oral and silent reading tests in a number of large cities in the country.

Teachers College was the largest school of education at the time. Its 1913-1914 enrollment was 1803, with a summer session attended by about 4000. These

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figures were notably larger than Chicago's 1912-1913 enrollment of 251 with 600 summer students (23, 108, 126, 141). The spirit of Teachers College at the time was one of "messianic" zeal to make teaching a profession, to try out with "fervancy and enthusiasm" what had been learned, to foster a spirit and devotion on the part of both faculty and students for an "everyday touch with practical life," and to tempt "any person altruistically inclined to become a teacher, in the hope that his work may be a perpetual benediction to all who share its fruits" (125, pp. 283-284; 134). Due to its large and growing enrollment the college was bursting; by 1912 all buildings were full and classes were held from early morning to late in the evening. The library was so crowded that it was hard to find a vacant chair. Since the student body was predominantly female, its nickname was "hairpin alley" (21, 23, 83). This characteristic, however, did not bother William Gray; he met his future wife, Beatrice Warner Jardine, during his year in New York. From a school teaching family also, on her mother's side, Beatrice received an undergraduate degree in Home Economics from Teachers College in 1916, and then taught in a Massachusetts high school for several years before marrying in 1921 (10, 60).

Many considered Teachers College the most important center of professional education in the country and the University of Chicago the second most important (8, 22, 83). These two institutions were the only schools organized specifically for teachers, with all staff selected especially to train teachers, and with a full range of practice and experimental schools and publications. The University of Chicago, being so much smaller in size, had a more limited faculty and a smaller range of courses (27, 83, 132). Therefore, Gray may have gone to Teachers College for a year in order to gain a broader perspective and to partake of the intellectual ferment, that created by the latitude and freedom its faculty had been given to try out new paths (83, 134). Furthermore, Charles Judd and Edward Thorndike had known each other since their undergraduate days at Wesleyan University, and Samuel Chester Parker had studied with Thorndike and been much impressed by him (38, 83, 85, 86). Thus, there were ample reasons for Gray to go to New York.

During the year 1913-1914 Gray took his usual overload of courses, ten in all, with a P (passed) in every one, including two and a half courses in educational psychology with Thorndike, two in history with Paul Monroe, one in philosophy with Dewey, one in elementary supervision with Frank McMurry, and administration with Strayer. Gray also wrote a thesis entitled *A Tentative Scale for Measuring Oral Reading* (49, 59, 126). On June 13, 1914 he received the Master of Arts degree and a Teachers College diploma, "Instructor in Education in Normal School," the latter given to those who, besides qualifying for a degree, gave "promise of superior professional ability as evidenced by their personality, character, experience, and technical training" (59; 126, p. 28).

Edward L. Thorndike. The "star" of Teachers College in 1913 was Edward L. Thorndike, the most famous educational psychologist the United States has produced and the man who revolutionized its educational technique (3, 22). His 1898 dissertation at Columbia, *Animal Intelligence*, had become an immediate landmark in psychology, as it inaugurated both animal experimentation in laboratories and a

new theory of learning, the theory of stimulus-response psychology or connectionism. His books, *Theory of Mental and Social Measurements*, 1904, and *Educational Psychology*, finished in 1913, established educational statistics as part of the higher curriculum in education and thus developed a scientific approach to the analysis of the mass of detail concerning human nature. As President of the American Psychological Association in 1912, Thorndike was at the peak of his influence (3, 20, 21, 83, 90).

When Gray arrived in New York in 1913, Thorndike's practicum on the application of psychological and statistical methods to education – which was derived from the course on mental measurements which Thorndike had taken from James McKeen Cattell in the 1890s and which was the first true course in educational measurement in America – was a popular part of a popular division at Teachers College. At that time Thorndike was in his measurements period; his ideas of measuring the results of instruction had grown out of his study of statistics and the psychology of the learning process (83, 90). In addition, many events of the late nineteenth and early twentieth centuries were combining to usher in the new testing movement: the statistical procedures of Francis Galton and Karl Pearson, the equal difference theorem of Cattell, the intelligence scale of Binet and Simon, the analysis of school retardation and elimination by Leonard Ayres, and the first crude comparative tests of Dr. J. M. Rice (1, 19, 20, 83, 90, 91). With all these developments as background, Thorndike and his students rapidly worked up a series of scales for measuring achievement: achievement scales for arithmetic in 1908 and 1909, for handwriting in 1910, for composition in 1912 and for spelling and drawing in 1913 (19, 20). Reading was obviously next in line, and at that point, at just the right moment, William S. Gray appeared. Thorndike went on to publish [illegible] reading scales, as well as parts of Gray's master's thesis (135) and a number of theoretical treatises on reading, including three important articles which defined reading as reasoning and thinking (136, 137, 138).

Years later Gray paid tribute to Thorndike's "kindly personal interest" and "the stimulating and productive guidance which he gave unstintingly" (57). Certainly, at Teachers College, Gray had full "opportunity to compare points of view": Strayer on school surveys, Monroe's sociological treatment of the history of education, Kilpatrick on the Project Method, McMurry as an Herbartian who had accepted Dewey's pragmatic philosophy, and Dewey himself on the historical relation of philosophy and education. But most of all, as Gray said, he realized "the great need for scientific studies of numerous educational problems." Since Thorndike was "the father" of educational measurement (1) and Charles Judd another leading exponent (39, 146), by 1914 Gray had received a double dose of the scientific approach to the study of education. Harold Rugg has provided a graphic description of these years between about 1912 and 1925: "We lived in one long orgy of tabulation. Mountains of facts were piled up, condensed, summarized and interpreted by the new quantitative technique. The air was full of normal curves, standard deviations, coefficients of correlation, regression equations" (124, p. 182).

Gray in 1916

Thus by the year 1916, as he was on the threshold of his brilliant career in reading, William S. Gray had accumulated the formative experiences which molded his personal view of reading, of education, and of the world. From his Midwestern, Protestant, rural middle-class background he acquired values typical for a successful career as a social scientist and representative of the upward rising nineteenth century United States population: respectability; responsibility; ambition; persistence; diligence; resourcefulness; good citizenship; a belief in God, family, and oneself; and a belief in education as the means of achievement. By nature hardworking, thorough, helpful, diplomatic, fair, loyal, professional, modest, practical, Gray fit well into professional organizations and into a vigorous Department of Education at the University of Chicago, a department which influenced the study of both reading and education in this country. His six years of public school teaching experience, as teacher and administrator, at all levels and in a variety of schools (rural, village and training), gave him a concern for the teaching of reading, as well as a practical knowledge and continuing interest in helping teachers in the classroom and in improving instruction.

Gray's first experience in higher education at Illinois State Normal University taught him, as an active debater and orator, how to organize, write, persuade and deliver a speech and, as a critic teacher, how to analyze teaching and diplomatically direct student teachers. It also immersed him in Herbartianism, providing him with a practical method, a humanistic concern for the teaching process and the child, a habit of analyzing and summarizing based on observation and experience, as well as a firm belief in the primacy of comprehension and meaning in reading and in the necessity of useful knowledge, self-realization, interesting material and the use of familiar experiences. At the University of Chicago and Teachers College, under the tutelage of Charles Judd and Edward Thorndike, Gray received a second impetus toward the study of reading, as well as a solid exposure to the scientific study of education. As evidenced in his master's thesis and doctoral dissertation, in which his silent and oral reading tests were developed, he turned toward objective measurement, mathematical precision, a critical attitude, efficiency in the schools, diagnosis based on test results and the use of the research results which supported both the economy of silent reading and the importance of a sequential program of reading instruction. Gray was fortunate to acquire his education during a period which has been called "the most significant in the whole history of education in the United States" (66, p. ii). He just happened to be a part of two very important movements: "While Herbartianism, the last of the rationalistic sciences of education, was running its course the most vigorously empirical science was developing. The one in its descent crossed the other in its ascent somewhere around 1915" (6, p. 166). At the very center of this crossing was William S. Gray, forming not merely "a trendy product" (33) but also the very basis of reading instruction in this country for almost the next half century.

References

1. Ayres, Leonard P. "History and Present Status of Educational Measurements," in Guy M. Whipple (Ed.), *The Seventeenth Yearbook of the National Society for the Study of Education, Part II: The Measurement of Educational Products*. Bloomington, Illinois: Public School Publishing Company, 1918, 9-15.
2. Bailyn, Bernard. "Education as a Discipline: Some Historical Notes," in John Walton & James L. Kuethe (Eds.), *The Discipline of Education*. Madison, Wisconsin: University of Wisconsin Press, 1963, 125-139.
3. Bayles, Ernest E., & Bruce L. Hood. *Growth of American Educational Thought and Practice*. New York: Harper & Row, 1966.
4. Beck, Hugo E. "The Contributions of Henry Clinton Morrison: An Educational Administrator at Work," doctoral dissertation, University of Chicago, 1962.
5. Bledstein, Burton J. *The Culture of Professionalism*. New York: Norton, 1976.
6. Borrowman, Merle L. *The Liberal and Technical in Teacher Education: A Historical Survey of American Thought*. New York: Teachers College, 1956.
7. Broudy, Harry. "Historic Exemplars of Teaching Method," in N.L. Gage (Ed.), *Handbook of Research on Teaching*. Chicago: Rand McNally, 1963, 1-43.
8. Brown, Elmer Ellsworth. "The Development of Education as a University Subject," *Teachers College Record*, 24 (May 1923), 190-196.
9. Buswell, G.T. "Some Personal Contacts with Former Students," *Zeta News*, 18 (May 1933), 24-29.
10. Cardoso, Jack J. "William Scott Gray, Jr.," original version for the *Dictionary of American Biography*, 1978, President's Office, University of Chicago.
11. "Cause of His Death," *Quincy Daily Journal*, January 20, 1908, 5.
12. Chall, Jeanne S. *Learning to Read: The Great Debate*. New York: McGraw-Hill, 1967.
13. "Coatsburg," *Camp Point Journal*, August 31, 1904, 5.
14. Collins, Randall. *The Credential Society: An Historical Sociology of Education and Stratification*. New York: Academic Press, 1979.
15. Collins, William H., & Cicero F. Perry. *Past and Present of Quincy and Adams County, Illinois*. Chicago: S.J. Clarke, 1905.
16. Commager, Henry Steele. *The American Mind: An Interpretation of American Thought and Character Since the 1880s*. New Haven, Connecticut: Yale University Press, 1950.
17. "Commencement at the University," *Bloomington Weekly Bulletin*, June 10, 1910, 2.
18. "Commencement Program," *The Vidette*, 22 (September 14, 1910), 1.
19. Cook, Walter W. "Tests, Achievement," in Walter S. Monroe (Ed.), *Encyclopedia of Educational Research*. New York: Macmillan, 1941, 1283-1301.
20. Cremin, Lawrence A. *The Transformation of the School: Progressivism in American Education, 1876-1957*. New York: Vintage, 1964.
21. Cremin, Lawrence A., David A. Shannon, & Mary Evelyn Townsend. *A History of Teachers College, Columbia University*. New York: Columbia University Press, 1954.
22. Curti, Merle. *The Social Ideas of American Educators*. New York: Scribner's, 1935.
23. "Dean's Report," *Teachers College Bulletin*, November 7, 1914.
24. De Garmo, Charles. *Herbart and the Herbartians*. New York: Scribner's, 1895 (a).
25. De Garmo, Charles. "Most Pressing Problems Concerning the Elementary Course of Study," in Charles A. McMurry (Ed.), *The First Yearbook of the Herbart Society for the Scientific Study of Teaching*. Bloomington, Illinois: Public School Publishing Company, 1895, 3-26 (b).

26. Dewey, J.L. *Knox County Directory*. Galesburg, Illinois: Liberal Book and Job Office, 1868.
27. Dewey, John. "Education as a University Study." *Columbia University Quarterly*, 9 (June 1907), 284-290.
28. De Young, Chris A. *Introduction to American Public Education*. New York: McGraw-Hill, 1942.
29. "Dr. Judd at University," *The Vidette*, 22 (May 4, 1910), 2.
30. Dunkel, Harold B. *Herbart and Education*. New York: Random House, 1969 (a).
31. Dunkel, Harold B. *Herbart and Herbartianism: An Educational Ghost Story*. Chicago: University of Chicago Press, 1970.
32. Dunkel, Harold B. "Herbartianism Comes to America," *History of Education Quarterly*, 9 (Summer 1969), 202-233 (b).
33. Dunkel, Harold B. Personal communication, September 1, 1983.
34. Edwards, Newton & Herman G. Richey. *The School in the American Social Order*. Boston: Houghton Mifflin, 1963.
35. Emerson, Louis L. (Ed.). *Blue Book of the State of Illinois, 1921-1922, 1925-1926*. Springfield: Illinois State Journal Company, 1921, 1925.
36. Eubank, Earle. Letter to W.S. Gray, May 5, 1917. University of Chicago College of Education Papers, Joseph Regenstein Library, University of Chicago.
37. "Find Boy's Back Was Crushed," *Bloomington Daily Bulletin*, January 26, 1908, 2.
38. Freeman, Frank N. "Biographical Sketch of Dr. Judd to 1909," *Zeta News*, 12 (April 22, 1927), 1-33.
39. Freeman, Frank N. "Charles Hubbard Judd, 1873-1946," *The Psychological Review*, 54 (March 1947), 59-65.
40. Froese, Victor. "Classics in Reading: A Survey," *Reading Teacher*, 36 (December 1982), 303-306.
41. Fuller, Wayne E. *The Old Country School: The Story of Rural Education in the Middle West*. Chicago: University of Chicago Press, 1982.
42. Genosky, Landry. *People's History of Quincy and Adams County, Illinois*. Quincy: Jost and Kiefer Printing Company, 1976.
43. Gray, Grace W. Personal communication, March 6, 1984.
44. Gray, Lillian R., & William S. *Record of the Family of Isaac and Sarah Hawkins Gray*, privately printed, 1955.
45. Gray, Ray. Personal communications, November 17 and 30, 1982; January 7 and March 31, 1983.
46. Gray, Will S. "Personal Reminiscences of the Interstate Oratorical Contest," ISNU *Index*, 1909, 99-101 (a).
47. Gray, William S. "Society and the Delinquent," *The Vidette*, 21 (June 1, 1909), 5-8 (b).
48. Gray, William S. Geographical series in *The School Century*, 6, May 1911, 435-438; June 1911, 499-501; 7, September 1911, 23-25; October 1911, 74-75, 82; November 1911, 122-123; December 1911, 180-181, 185; January 1912, 235-237; February 1912, 296-297; March 1912, 354-356; April 1912, 400-401; May 1912, 454-456; June 1912, 525-527.
49. Gray, William S. "A Tentative Scale for Measuring Oral Reading," master's thesis, Columbia University, 1914.
50. Gray, William S. Letters to S.C. Parker, June 20 and September 2, 1915. University of Chicago College of Education Papers, Joseph Regenstein Library, University of Chicago.

51. Gray, William S. Letter to Dean Dodson of the University of Chicago Medical School, January 19, 1920. University of Chicago College of Education Papers, Joseph Regenstein Library, University of Chicago.
52. Gray, William S. "Types of Teaching Reading," *Pennsylvania School Journal*, 77 (October 1928), 84-86.
53. Gray, William S. "Notable Reforms in Teaching Reading," *Journal of the National Education Association*, 19 (December 1930), 287-288.
54. Gray, William S. Autobiographical piece sent to Verna Walters, June 19, 1931. Biography file in the Gray Room, Judd Hall, University of Chicago, and University of Chicago Department of Education Papers, University of Chicago.
55. Gray, William S. Letter to W.S. Gray, August 15, 1932. University of Chicago Department of Education Papers, Judd Hall, University of Chicago.
56. Gray, William S. "Changes in the Teaching of Reading," *School and Community*, 35 (September 1949), 262-265, 267 (a).
57. Gray, William S. "Edward L. Thorndike, 1874-1949," *School Briefs*, 13 (October 1949), 3 (b).
58. Gray, William S. "Alma Mater Unlimited," *The ISNU Alumni Quarterly* 39 (September 1950), 6-9.
59. Gray, William Scott, Jr. Academic record, Illinois State Normal University, University of Chicago, and Teachers College.
60. Gray, Mrs. William Scott, Jr. Personal communication, February 18, 1984.
61. Gray, William S., Sr. "Normal School," *Public-School Journal*, 13 (July 1894), 646-647.
62. Gray, William S., Sr., John L. Dryer, & Rodney H. Brandon (Eds.). *Proceedings of the Constitutional Convention of the State of Illinois, 1920*. Springfield: Illinois State Journal Company, 1920, 5 volumes.
63. Gray, William S. III. Personal communications, February 14 and 18, 1984.
64. Great River Genealogical Society. School records, Quincy Public Library, Quincy, Illinois.
65. "Great Victory for Illinois," *The Vidette*, 21 (May 11, 1909), 5-8.
66. Harper, Charles A. *Development of the Teachers College in the United States, with Special Reference to the Illinois State Normal University*. Bloomington, Illinois: McKnight and McKnight, 1935.
67. Harper, Charles A. *A Century of Public Teacher Education*. Washington, D.C.: American Association of Teachers Colleges, 1939.
68. Henderson, Bertha, & others. "An Outline of the Course in Geography in the University Elementary School III and IV," *Elementary School Journal*, 17 (November-December 1917), 186-205, 268-279.
69. Herbart, Johann Friedrich. *The Science of Education*. Translated by H.M. & E. Felkin. Boston: Heath, 1902.
70. Herbart, Johann Friedrich. *Outlines of Educational Doctrine*. Translated by Alexis F. Lange; annotated by Charles De Garmo. New York: Macmillan, 1904.
71. *The History of Adams County, Illinois*. Chicago: Murray, Williamson, & Phelps, 1879.
72. *History of Knox County, Illinois*. Galesburg: Charles C. Chapman, 1878.
73. Hulse, E. Maude. Personal communication, December 4, 1982.
74. Hutchins, Robert M. "Charles Hubbard Judd: A Tribute," paper read at the dedication of Judd Hall at the University of Chicago, April 15, 1948.

75. Illinois, State of. *Twenty-Third, Twenty-Fifth, Twenty-Sixth, Twenty-Seventh, Twenty-Eighth Biennial Reports of the Superintendent of Public Instruction, 1898-1910*. Springfield: State Printers, 1901-1911.
76. Illinois, State Board of Education: Normal. *Proceedings*. Springfield: Illinois State Journal, 1910, 1911, 1912.
77. Illinois State Normal University. *Alumni Register, 1860-1927*. Normal: ISNU, 1927.
78. Illinois State Normal University. *Annual Catalog*. Normal: ISNU, 1908-1909, 1911-1912.
79. Illinois State Normal University Senior Class. *The Index*. Normal: Senior Class, 1909, 1910.
80. "The Inter-Society Contestants," *The Vidette*, 21 (October 20, 1908), 5-6.
81. "Inter-State Debates," *The Vidette*, 22 (May 18, 1910), 1.
82. Johnson, Henry C., Jr., & Erwin V. Johanningmeier. *Teachers for the Prairie: The University of Illinois and the Schools, 1868-1945*. Urbana: University of Illinois Press, 1972.
83. Joncich, Geraldine. *The Sane Positivist: A Biography of Edward L. Thorndike*. Middletown, Connecticut: Wesleyan University Press, 1968.
84. Judd, Charles H. "The Relation of Special Training to General Intelligence," *Educational Review*, 36 (June 1908), 28-41.
85. Judd, Charles H. "Samuel Chester Parker." *The Elementary School Journal*, 25 (September 1924), 2-9.
86. Judd, Charles H. "A Century of Applications of Psychology to Education." *Teachers College Record* XXVII, May 1926, 771-781.
87. Judd, Charles H. "Autobiography" in Carl Murchison (Ed.)., *A History of Psychology in Autobiography*, vol. II. Worcester, Massachusetts: Clark University, 1932, 207-235.
88. Judd, Charles H., & Samuel C. Parker. *Problems Involved in Standardizing State Normal Schools*. U.S. Bureau of Education Bulletin no. 12. Washington: Government Printing Office, 1916.
89. Judd, Charles S., with the cooperation of W.S. Gray, C.T. Gray, Katherine McLaughlin, Clara Schmitt, & A.R. Gilliland. *Reading: Its Nature and Development*. Supplementary Educational Monographs, volume 2, number 4. Chicago: University of Chicago, 1918.
90. Kandel, I.L. (Ed.). *Twenty-Five Years of American Education*. New York: Macmillan, 1929.
91. Kandel, I.L. *William Chandler Bagley, Stalwart Educator*. New York: Teachers College, 1961.
92. Keith, John A.H. (Ed.). *Semi-Centennial History of the Illinois State Normal University, 1857-1907*. Normal: ISNU, 1907.
93. Knapp, R.H., & H.B. Goodrich. *Origins of American Scientists*. New York: Russell and Russell, 1952.
94. Larson, Magali Sarfatti. *The Rise of Professionalism*. Berkeley: University of California Press, 1977.
95. "The Literary Contest," *The Vidette*, 21 (January 5, 1909), 5-9.
96. Lynd, Robert S., & Helen Merrell. *Middletown: A Study in Contemporary American Culture*. New York: Harcourt Brace Jovanovich, 1929.
97. "Maplewood High School," *Camp Point Journal*, May 18, 1904, p. 1; October 26, 1904, p. 8.

98. Marshall, Helen E. *Grandest of Enterprises: Illinois State Normal University, 1857-1957*. Normal: ISNU, 1956.
99. McCann, B.H. (Ed.) *Delegates' Manual of the Fifth Constitutional Convention of the State of Illinois 1920*. Springfield: Illinois State Journal, 1920.
100. McCaul, Robert L. "Charles Hubbard Judd," in John A. Garraty & Edward T. James (Eds.), *Dictionary of American Biography, Supplement Four, 1946-1950*. New York: Scribners, 1974, 443-446.
101. McMurry, Charles A. *The Elements of General Method*. Bloomington, Illinois: Public School Publishing Company, 1892.
102. McMurry, Charles A., & Frank M. McMurry. *The Method of the Recitation*. New York: Macmillan, 1897.
103. McMurry, Dorothy. *Herbartian Contributions to History Instruction in American Schools*. New York: Teachers College, 1946.
104. McMurry, Frank M. "Some Recollections of the Past Forty Years of Education," *Peabody Journal of Education*, 4 (May 1927), 325-332.
105. Monroe, Walter S. *Teaching-Learning Theory and Teacher Education, 1890-1950*. Urbana: University of Illinois Press, 1952.
106. Moore, David W., John E. Readence, & Robert J. Rickelman. "An Historical Exploration of Content Area Reading Instruction," *Reading Research Quarterly*, 18 (Summer 1983), 419-438.
107. Mossman, Lois Coffey. *Changing Conceptions Relative to the Planning of Lessons*. New York: Teachers College, 1924.
108. O'Leary, Timothy F. *An Inquiry into the General Purposes, Functions, and Organization of Selected University Schools of Education*. Washington, D.C.: Catholic University of America Press, 1941.
109. "The Oshkosh Debate," *The Vidette*, 22 (June 1, 1910), 4.
110. Pangburn, Jessie M. *The Evolution of the American Teachers College*. New York: Teachers College, 1932.
111. Parker, Edith P. "The Partition of Africa: A Seventh-Grade Geography Unit," *Elementary School Journal*, 20 (November 1919), 188-202.
112. Parker, Samuel Chester. Letter to A.C. Boyce, May 27, 1915. University of Chicago College of Education Papers, Joseph Regenstein Library, University of Chicago.
113. Perry, Albert J. *History of Knox County, Illinois*. Chicago: S.J. Clarke, 1912.
114. Plucker-Kaye, Lina S., & L. Roehrick. *Brevet's Illinois Historical Markers and Sites*. Sioux Falls, South Dakota: Brevet Press, 1976.
115. *Portrait and Biographical Record of Adams County, Illinois*. Chicago: Chapman Brothers, 1892.
116. Potter, David. *Debating in the Colonial Chartered Colleges, 1642-1900*. New York: Teachers College, 1944.
117. "Pupils Graduated from Normal University," *Bloomington Daily Pantagraph*, June 10, 1910, p. 7.
118. Rethlingshafer, Dorothy. "State Aid for Rural School Libraries," master's thesis, University of Chicago, 1924.
119. "The Richard Edwards Medal Contest," *The Vidette*, 21 (February 16, 1909), 10-11.
120. Riesman, David. *Constraint and Variety in American Education*. Lincoln: University of Nebraska Press, 1956.
121. Roe, Anne. *The Making of a Scientist*. New York: Dodd, Mead, 1953.
122. Ross, Dorothy. *G. Stanley Hall: The Psychologist as Prophet*. Chicago: University of Chicago Press, 1972.

123. Rugg, Harold. "A Century of Curriculum-Construction in American Schools," in Guy M. Whipple, (Ed.), *The Twenty-Sixth Yearbook of the National Society for the Study of Education: The Foundations and Technique of Curriculum-Construction*. Bloomington, Illinois: Public School Publishing Company, 1926, 3-116.
124. Rugg, Harold. *That Men May Understand*. New York: Doubleday, Doran, 1941.
125. Russell, James E. "Standards of Scholarship and the Professional Spirit in Teachers College," *Columbia University Quarterly*, 9 (June 1907), 277-284.
126. "School of Education Announcement 1914-1915," *Teachers College Bulletin*, March 28, 1914.
127. Shanholtzer, Albert (Ed.). *Coatsburg 1855-1955: Our First 100 Years*. Coatsburg, Illinois: Business Supply Company, 1955.
128. Silman, Rae. "Lummis House at Coatsburg Is Over 100 Years Old," *Quincy Herald-Whig*, October 17, 1971, section E, p. 1.
129. Slosson, Edwin E. *Great American Universities*. New York: Macmillan, 1910.
130. *Standard Atlas of Adams County, Illinois*. Chicago: George A. Ogle, 1901.
131. "State News," *Illinois School Journal/School and Home Education*, 2, June 1882, 21-28; August 1882, 119-124; 3, August 1883, 100-104; November 1883, 178; 4, May 1884, 331-338; 6, June 1887, 386-388.
132. Suzzallo, Henry. "The Status of Education in American Universities," *Columbia University Quarterly*, 9 (June 1907), 290-300.
133. "Synopsis of Academic Appointments, William S. Gray," President's Office, University of Chicago.
134. Tenenbaum, Samuel. *William Heard Kilpatrick, Trail Blazer in Education*. New York: Harper, 1951.
135. Thorndike, Edward L. "The Measurement of Ability in Reading," *Teachers College Record*, 15 (September 1914), 207-277; 16 (November 1915), 445-467; 17 (January 1916), 40-67.
136. Thorndike, Edward L. "The Psychology of Thinking in the Case of Reading," *Psychological Review*, 24 (May 19[illegible]), 220-234 (a).
137. Thorndike, Edward L. "Reading as Reasoning: A Study of Mistakes in Paragraph Reading," *Journal of Educational Psychology*, 8 (June 1917), 323-332 (b).
138. Thorndike, Edward L. "The Understanding of Sentences: A Study of Errors in Reading," *Elementary School Journal*, 18 (October 1917), 98-114 (c).
139. University of Chicago. *Annual Registers, 1912-1913, 1914-1915, 1915-1916*. Chicago: University of Chicago Press, 1913-1916.
140. University of Chicago. *The Eighty-Seventh Convocation, June 10, 1913, Hutchinson Court*. Chicago: University of Chicago, 1913.
141. University of Chicago. *The President's Reports, 1911-1915*. Chicago: University of Chicago Press, 1912-1916.
142. University of Chicago School and College of Education. *Minutes of the Faculties, June 9, 1913*. In Special Collections, Regenstein Library, University of Chicago.
143. Veysey, Laurence R. *The Emergence of the American University*. Chicago: University of Chicago Press, 1965.
144. Wesley, Edgar B. NEA: *The First Hundred Years*. New York: Harper, 1957.
145. Whitbeck, R.H. "Where Shall We Lay the Emphasis in Teaching Geography?" *Education*, 31 (October 1910), 108-116.
146. White, Woodie Thomas. "The Study of Education at the University of Chicago, 1892-1958," doctoral dissertation, University of Chicago, 1977.

BEST COPY AVAILABLE

147. Wilcox, David F. (Ed.). *Quincy and Adams County*. 2 volumes. Chicago: Lewis Publishing, 1919.

148. Wilder, David Elliott. "The Reading Experts: A Case Study of the Failure to Institutionalize an Applied Science of Education," doctoral dissertation, Columbia University, 1966.

149. "William Gray, Former State Senator, Dies." *Quincy Herald-Whig*, February 15, 1940, p. 1.

150. Woodward, H.S. "Normal Wins the Inter-Normal Oratorical Context," *The Vidette*, 21 (March 30, 1909), 5-7.

151. Wright, Gwendolyn. *Moralism and the Model Home*. Chicago: University of Chicago Press, 1980.

152. "Wrightonia." *The Vidette*, 21, January 19, 1909, 9; February 9, 1909, 9; October 5, 1909, 2.

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WILLIAM S. GRAY: THE SCHOLAR

In the short space available, it is impossible to even mention all of the scholarly contributions William S. Gray has made to reading. Therefore the writer has chosen, from more than 500 publications, to describe those which appear to have had the greatest impact on subsequent research and practice. Even with these choices, only the briefest of descriptions can be given.

The studies are grouped so that there is at least one study included to represent several others that were omitted. The studies described here had both scientific and practical influences, a characteristic of much of Gray's work. In addition, reference is made to some of Gray's scholarly summaries and interpretations of the scientific research of others in the field, all of which were planned to interpret the present status of knowledge and to encourage further investigation.

In each of the sections that follow, attention will be given first to the research and then to some application of the findings or conclusions.

Standardized Oral Reading Tests

Prior to and during the preparation of the Gray Oral Reading Paragraphs (15),** leaders in the scientific movement were pressing for more exact data than were available earlier. Scales and rudimentary tests had been constructed in various

* With the assistance of Sam Weintraub, State University of New York at Buffalo.

** The reference numbers within this chapter refer to the references which are listed and numbered within the bibliography of William S. Gray's publications, on pages 37 to 69.

subject areas, including silent reading. Gray chose to develop an oral reading test, devising and selecting twelve short paragraphs, and experimenting with them to be sure of proper progression. He devised a method for scoring and developed norms for the first eight grades. Finally, he had the examiner record time and exact errors, the latter to serve as a guide to proper instruction.

Without today's more sophisticated knowledge of vocabulary and concept difficulties (or readability) and of statistical techniques, it is not surprising that only one form emerged in 1915: the *Standardized Oral Reading Paragraphs* for grades one to eight (15). What is surprising is that, with only minor revisions, this test became the most popular oral reading test available and remained so, without revisions, until 1963 when the *Gray Oral Reading Tests* (519) were published. These second tests, composed of four forms, are still in use.

In order to avoid the problem of repeated administrations of the Gray Oral Reading Paragraphs to assess growth, Gray constructed the *Standardized Oral Reading Check Tests* in 1923 (51). There were four sets of tests, each containing five paragraphs of approximately equal difficulty.

The techniques used in building these instruments, with variations, became a pattern for constructing oral reading tests for the next half century. Likewise, a similar plan was used for informal tests, about which Gray wrote in 1920 (37).

The practical values of these tests were enormous. The scores obtained, when examined along with silent reading scores, helped to provide a deeper insight into the relationship between oral and silent reading, to describe the patterns of growth in oral reading, and especially to note individual differences among pupils at a given level of total achievement.

One of the special values came from the record of errors and their patterns. Teachers could identify group strengths and weaknesses and then adjust instruction accordingly. In addition, individual pupils portrayed unique patterns of oral reading, a concept which was extremely valuable in diagnosis and which contributed enormously to the understanding of oral reading errors which pervades the literature today.

Combining the research and the practical aspects of the Oral Reading Paragraphs was an important element in launching Gray's early career as a reading specialist. It also provided a tool for many of his other outstanding contributions; two of special importance were ideas for the diagnosis of reading difficulties and a measure which was useful in school surveys.

Diagnosis and Remedial Instruction

In 1918 Gray wrote about the use of tests to improve reading instruction(29). In 1921 his writings noted the importance of fitting instruction to the perceived weaknesses of individual children (42). At that time he advocated using the results of oral and silent reading tests, as well as observations. In 1922, with the cooperation of three others, he published *Remedial Cases in Reading: Their Diagnosis and Treatment* (46). This was another landmark study with immense impact on the growing profession. In this monograph Gray attempted to identify as

many types of remedial cases as possible, determine the causes and distinguishing characteristics of each type, and devise appropriate remedial instruction. He used case histories obtained from parents and schools to illuminate and explain the test findings and observations of learning. Putting all these data together, individual instruction was planned and later altered as seemed necessary.

The findings of the study described five different categories of pupils, each with distinguishing characteristics. The categories included: those who have made little or no progress in learning to read; those who exhibited difficulty in interpreting what they read; those with problems in the mechanics of reading; those with a slow reading rate; and those who had problems in almost all phases of reading.

The causes of reading difficulty listed were equally broad. Such factors as intelligence, language, home background, interest, reading materials and instruction were among the many listed. Each case study included all of the accumulated results of diagnosis and instruction and the amount of progress made by each pupil during the time given to daily tutoring.

Some of the methodological techniques of diagnosis were not new, but the combinations were different and the base was broadened. Instruction of individuals was matched to the results of the diagnosis. Then pupils were reassessed and instruction altered in order to obtain rapid progress. Gray made a strong plea for systematically canvassing possible causes for failure and, above all, building new remedial instruction suited to individual interests.

The study also made case study techniques a respectable approach to research, at a time when attention was focused on assessing large numbers of pupils and statistical descriptions of data.

The practical implications of this study were enormous. First, it moved research in reading from the laboratories to the classroom, thus offering hope that schools and teachers could be partners with reading researchers. In recent decades this has been a trend which young scholars have often referred to as "new."

Second, the study helped draw to the University of Chicago neophytes who became outstanding scholars under the influence of Gray and his colleagues. Even those who returned to the classroom were imbued with a breadth of understanding which helped to counteract the tendency to diagnosis alexia with no hope of overcoming it. The study also led teachers to experiment with different methods, rather than relying upon a single one.

Third, it began to help secondary schools and colleges undertake programs adapted to individuals and develop techniques for diagnosis and instruction at these upper levels.

Finally, the study sparked an interest in specialization in dealing with poor readers, and ultimately led to the development of reading clinics. Some clinics had a narrow concept of reading difficulty, while others expanded and refined Gray's concepts of causes of difficulties, made diagnosis more orderly, and developed ingenious methods for remedial treatment. Such progress pleased Gray, a teacher who urged his students to carry on research and to practice newer types of treatment.

School Surveys

In the decade before 1920, surveys of schools in cities, counties and states emerged as a means of improving instruction. Observations, conferences, and analysis of instructional materials used in schools formed the basis for conclusions and recommended changes in procedures. Gray participated in many school surveys, his first published report being in 1916 (17). As standardized tests emerged, the surveys became more objective.

Of special interest during this period was the broadening of Gray's concept of reading, in 1919 to studying and the content areas. By 1921, he included rating scales and self analysis in the improvement of reading (38). In the same year he also related the results of school surveys to the training of teachers and to general improvement at the state level (45).

Later, after techniques had been developed for carrying on even more extensive surveys with greater objectivity, most surveys were mimeographed rather than published, and therefore many do not appear in the bibliography included in this book.

The research techniques used in school surveys went through many stages to develop objectivity. Standardized reading tests contributed to the techniques, and those used in other fields were also adapted and incorporated. Increasingly, the survey became a team effort with various subject matter specialists covering specific areas. However, Gray's publications noted and considered the role of reading in these subject areas, until reading later became a part of them.

Practically, the survey of any unit in the school or any group outside the school revealed varying levels of achievement, problems needing to be be solved, and procedures and materials needing adaptation. A survey also offered guides for improvement of instruction.

Gray's wide experience in school surveys, which were useful in their own right, became a steppingstone to increasingly larger studies both in the United States and abroad.

Major Studies Outside the United States

By 1936 Gray had used his expertise to examine the teaching of English in Puerto Rico, an examination which resulted in appropriate recommendations for improving instruction (205). In 1949 Gray was called to Egypt to analyze methods, techniques and materials for the Ministry of Education. This was a challenging study because of the great differences in spoken and printed language between the two countries. These differences and also the high rate of illiteracy made it imperative for Gray to use all of his accumulated knowledge and skills to suggest remedies. He addressed himself to the construction of sound and useful reading materials, to the organization of teacher training, to scholarly research and efficient development of language, and to looking at what was available to read after children and adults acquired given levels of skills. The final report, printed in Arabic, led to many changes in the total educational system (410).

By far the most important of Gray's scholarly studies was done for UNESCO, published in 1956 and translated into French and Spanish (474). The purposes of this study were to review current world literacy programs, evaluate their strengths and weaknesses, and collate teaching methods and materials, with special attention to providing guidance to underdeveloped areas of the world.

The study was conducted over a period of four years. More than 500 sets of instructional readers already available were reviewed, and 100 each for children and adults were studied in detail. A second source of information came from questionnaires directed to leaders, field workers and publishers. A third source was from interviews with people who came to UNESCO House and from visits by Gray to eight countries to obtain firsthand information. A preliminary report, asking for criticisms and suggestions, was prepared and sent to the National Commissions of UNESCO Member States as well as to selected leaders in literacy training.

Meanwhile, a detailed study was made of types of languages, characters used in writing various languages, and the influence of these factors on teaching reading. Concurrently, a study was made at the University of Chicago, using eye-movement photography, of the behaviors shown in oral and silent reading of mature readers in each of 14 different languages.

The details of the findings are too numerous to mention here. Perhaps it is sufficient to say that only someone, such as William S. Gray, with the broadest concept of reading and the acceptance of different teaching methods for different languages, purposes and individual differences, could have made such recommendations. Moreover, as was typical of this researcher, Gray recommended more research and further experimentation, as well as the pooling of new data as they became available.

An entire section on research in writing in the UNESCO study has been omitted here because of the current topic and the limited space.

Adult Reading

Another of Gray's scholarly contributions was his research into the reading of adults. This research is characterized by its breadth and depth of understanding of the reading of adults.

As a result of the findings from standardized tests and school surveys, it was clear that many children were entering adulthood unable to read or to use reading where it was essential. For example, as early as 1925 (59), Gray wrote of the values of reading in such areas as science, industry or inventions. Additionally, he advocated the importance of strong motives for and permanent interest in reading, "that will inspire the present and future life of the reader and provide for the wholesome use of leisure time" (p. 11). It was evident to him then that little was known about the status of adult reading.

In 1929, Gray and Munroe (98) published a study of the reading interests and habits of adults. The technique used was a half-hour interview, based on a questionnaire using 270 subjects, all but 15 of whom represented differences in sex,

marital status, amount of education and economic level. Among the findings was that "millions of natural born Americans were illiterate." Some had never learned to read, while, with others, disuse had resulted in loss of competence.

Perhaps more important was that the character or quality of much that was read was undesirable or, at best, insignificant in promoting individual growth and social enlightenment. The authors concluded that reading interests and habits could be developed among children and youth in a manner that would insure their development of significant interests and tastes (pp. 273-274).

Gray's concern about illiteracy led him to write a manual for teachers of illiterates in 1930 (104). In it he began his analysis of one of the persistent problems in his studies of illiteracy: the definition of an illiterate. Before 1920 an illiterate was described as one who had no schooling at all. Studies showed that, during World War I, about one-fourth of the men had never attended school long enough to learn to read well enough to take a reading test. Most of the data prior to that time, and thereafter for awhile, came from the U.S. Census Bureau's question to adults, "Can you read and write, or both?" Thereafter, the literacy level was estimated by the number of years of school completed. Around 1950, the term "functional illiteracy" – the inability to read well enough to function in a literate society – was advocated.

Although a number of investigations of isolated adult groups were made, Gray and Leary (193) studied what they considered to be a typical group of adults – a rural community in the Midwest. About 150 of the 200 subjects took both an oral and a silent reading test. The fact that oral reading scores were considerably higher (1.5 grades higher) than silent reading scores suggested where the schools had placed emphasis.

The wide range in achievement, from those unable to read at all to those able to read at a college-senior level, permitted an examination of the reading changes which occurred among young people after leaving school. Pupils who remained in school for six years or more tended to increase their scores as adults, while those who had dropped out earlier than grade five tended to lose what they were presumed to have learned. This finding led to a search for reasons for such changes. One suggested reason was that pupils who had dropped out of school earlier than grade five could find nothing interesting to read.

The reading difficulty of materials could be estimated by a formula developed by Gray and Leary. Although there were other studies, this study was the most extensive in the history of readability. Gray and Leary isolated 289 possible factors which were grouped into four categories: content, style of writing and presentation, format, and general features of organization. They chose to concentrate on the 82 subfactors called style. They built an "Adult Reading Test" to serve as a criterion, requiring readers to answer questions on fictional and nonfictional paragraphs. Through elimination, they found 20 of the style factors to be related to readability. Using statistical analysis, they developed a formula for estimating difficulty of adult reading materials. Building on this enormous study, later formulas were developed which were more efficient and simple to use.

However, this study identified clearly the need to consider multiple factors in determining readability of materials and the complexity of the problem. Only today are investigators beginning to research some of the other factors which determine the difficulty of materials, factors identified 50 years ago by Gray and Leary (193).

After pondering and informaliy examining the problem of defining reading maturity, Gray and Rogers (486) reported a survey of the characteristics of mature readers. In order to do so it was necessary first to develop a framework for interviews. Using that framework, the authors interviewed individuals who represented three categories of education: less than eighth grade, secondary school level and beyond secondary school level. The subjects were asked to read selected editorials, news and/or features, and digests. Questions asked afterwards dealt with attitude, social and self insight, comprehension, and ability to use the materials read. A multiple rating scale was devised and revised for use in the study. Finally, another sample of 21 highly efficient readers was included in order to find the highest level of maturity. Case studies supplemented the findings on tests and interviews. From the mass of data, treated as objectively as possible, came some descriptions of a mature reader. First, it was clear that maturity seldom occurred in all aspects considered, but rather in differing partial combinations. Second, the "...crucial point along the route to maturity in reading is the time at which reading begins to inspire the reader, to give him a feeling of pleasure and satisfaction in the activity, and to exert a conscious integrative effect upon him" (p. 237). No longer was reading a vicarious experience; now it spoke directly to the reader, changing values, broadening interests, opening new horizons and providing new ways of thinking. This study continues to be a milestone in guiding secondary and college teachers to develop their capable students' abilities to their fullest.

The techniques used in the study of maturity in reading were experimental, frequently refined but, as the authors stated, incomplete. However, the procedures formed a better basis for future research and the development of greater objectivity than did casual interviews. *Maturity in Reading: Its Nature and Appraisal* (486) is considered to be a milestone in the field, and rightfully so.

The practical values of the study were more subtle. One was the suggestion that the teachers themselves in secondary schools and colleges be challenged to greater maturity in reading, so that, in turn, they could inspire their good student readers to demonstrate their skills. The usual procedure at these upper levels of education was to try to help only the poor readers. Gray made a strong plea for instruction for all students, in all subject areas, and at all levels of achievement (p. 22).

Gray's work with adult reading has been followed by great attention to illiterates, but by no final solution. His view that all mature reading is to develop the individual and is for the solution of social problems is not fully accepted. His finding that purposes for adult reading and levels of maturity vary with individuals seems pertinent today.

Summaries of Investigations and Practices

One of Gray's unique abilities was his ability to summarize and synthesize previous research. Indeed, every study he made began with such a summary, without which he felt that he could not identify new problems and new techniques, and add to what was already known.

Gray produced two types of summaries: 1) those that assembled references on a particular topic, or during a given period of time; and 2) those that led to suggestions for improvement in reading or in other areas. His published summaries of investigations began early in his career (22) and dealt not only with numerous aspects of reading, but with supervision, curriculum, general instruction, teacher education, language arts, and various content areas.

Each of the summaries proved to be useful to those who were particularly concerned with various topics. It is not surprising, then, to note that in 1925 Gray published a monograph which summarized the previous investigations of reading. This 275 page monograph included 436 studies conducted in various countries, as well as in the United States, prior to July 1, 1924. It included sections on: reading in modern life; the uses of reading in school; the values of various methods of beginning reading; the interpretation of, speed of processing, interest in and content of different reading materials; and a historical sketch of language and reading. The variety of topics was chosen in order to apprise teachers and supervisors, as well as other researchers, of the research and the implications (60). Later Gray published a supplement, including 73 studies and some interpretation. This plan continued until 1931 when it became a tradition to publish annually the "Summary of Reading Investigations." By 1959 the field had broadened and the publication became known as the "Summary of Investigations Related to Reading" (508). This change characterized the foresight Gray always exhibited in embracing pertinent research in a wide variety of fields. Even though he continued to summarize the research annually, he could not anticipate that by 1980 the research abstracts alone would outgrow four journals and become a separate publication.*

As the quantity of research grew, it became impossible to offer critical reviews to serve one of the original purposes of the Annual Summary – that of helping school officers and teachers identify findings to improve practice. However, the second original purpose was to serve researchers, and in this respect the publication has been tremendously successful.

During the 1960s one person could not cover all of the entries, so additional authors were necessary. This was due, in part, to the number of allied professions participating in reading research and, therefore, the larger volume of journals to be covered as they were published.

Perhaps the greatest benefit accrues to those few who read and abstract the books and articles, since these readers keep abreast of all research in their areas.

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* Weintraub, Sam; Smith, Helen K.; Roser, Nancy L.; Rowls, Michael and Hill, Walter R. *Summary of Investigations Relating to Reading, July 1, 1978 to June 30, 1979*. Newark, DE.: International Reading Association, 1980.

However, school personnel, graduate students and mature researchers can readily identify the problems they are studying and, using the summaries, can locate the original research. Some studies need to be repeated and others need more refined techniques of investigation, but no researcher should need to be blindly "rediscovering America," thanks to the tremendous foresight of William S. Gray.

In addition to the annual summaries, Gray produced myriad other summaries. As his bibliography reflects, he published more summaries than any other reading specialist. Jokingly, his students often suggested that the "S" in his name referred to summary. Only a few of the most important interpretive summaries can be discussed or even mentioned in the remainder of this section.

The *Yearbooks of the National Society for the Study of Education* have been a rich source of collation of research and suggestions for school practice. Although each has been prepared by a committee, it is noteworthy that the Twentieth Yearbook, Part 2 (43) included Gray as a member of its elite committee and that he prepared a chapter dealing with individual problems in silent reading at grades four, five, and six.

The Twenty-Fourth Yearbook, Part 1 (59) was produced by a committee chaired by Gray, and included three chapters by Gray on the topics of reading in school and social life, the objectives of reading instruction, and a modern program for elementary and high schools. Each chapter distinguished between what was known, what were the best opinions, and what was unknown and in urgent need of research. This yearbook was so important that, according to Whipple [in the Thirty-Sixth Yearbook (220)], over 30,000 copies were sold and "it must have been a most potent influence in American educational thinking."

Gray served as chair of the committee to produce the Thirty-Sixth Yearbook, Part 1. This volume updated the research that had been done since the previous yearbook. Its major contribution was the broadening of the definition of reading to include full understanding, critical reaction to what was read, and the use of the ideas secured. Purposes for reading were discussed and attention was given to recreational reading, including solving personal problems and meeting social needs. In other words, reading was described as a varied and highly complex process, permeating the whole school curriculum and the adult life of the reader.

In 1948, the Forty-Seventh Yearbook for the Society (374) dealt with reading in secondary schools and colleges, with Gray as chair of the committee to produce it. The stated purposes were to continue reading instruction at this level, not just for poor readers but for all students, with the aim to promote depth of understanding, critical reactions and judgments, and open inquiry.

Reading was explained by the committee as a series of complex activities organized under such categories as: grasping the literal meaning of what was read, securing the broader meanings inherent in a passage, reacting to what was read, fusing the ideas acquired with previous experience. These topics are closely related to the major strands in reading at the elementary level finally produced by Gray in the model explained later. A beginning was made in identifying the subtopics and describing how they might be developed.

Throughout his career, Gray made significant contributions to the yearbooks of the National Society for the Study of Education, especially to those devoted to reading at all levels, including adults, and to the problems of illiteracy. His last topic, "The Role of Teacher Education" was published in Part 1 of the Sixtieth Yearbook (518). It stressed the newer concept of preservice training, and also the necessity for continuous inservice training in schools, with a special reading teacher to guide staff development.

Throughout these publications there was a continuous thread, coupled with constant adaptations to the changes in school programs as well as to the changes in needs and interests of adults and society.

The Encyclopedia of Educational Research, prepared under the auspices of the American Educational Research Association, was first published in 1941 (286). Gray's interpretive summary of reading research began with reference to the Greek and Roman periods and continued to publication date. Recently, it has been recognized as a masterpiece and reprinted by the International Reading Association under the title *Reading: A Research Retrospective, 1881-1941*. In the Preface to that volume, John Guthrie states that "...this monograph warrants acknowledgement in any scholarship on reading which claims the name of originality" (p. vii). In the Foreword, Jeanne Chall states that the section on comprehension "...foretells present theory and research" (xi). In addition, Chall suggests that Gray used the past to understand the present and future. Gray's 1941 summary is organized under eleven topics, similar to those used in the Annual Summaries of Research.

Gray contributed the article on research to the second and third editions of the *Encyclopedia of Educational Research* (408, 517). Characteristically, he did not rest on his laurels by merely updating the information from the first edition, but presented a different organization for the material as well as an expanded discussion of various aspects of the field. For example, the social effects of reading, untreated in the first article, are dealt with in subsequent ones. Among the other areas either expanded upon or added to were readability, the apprehension of meanings, the influence of mass media, adult reading ability, and children's reading interests. As the field changed direction, Gray grew with it, and it is interesting to note its development as viewed through his eyes. Indeed, a close reading and analysis of these three articles by Gray would treat the reader to a mini case study of the growth of research and knowledge in the field between 1940-1960.

In the 1930s, school personnel were searching for many answers to questions on improving reading instruction. Some commercial companies were sponsoring conferences, primarily to tout their particular machines or materials. This led to the driving desire to hold a conference of great breadth, one which would be scientifically sound and also helpful. The first such conference held in 1938 at the University of Chicago was carried out under Gray's direction. No publication resulted from that first conference, but the many requests for copies of the papers led to the publication of subsequent proceedings, through 1966. Topics of vital interest and concern were chosen each year.

In the first published proceedings, Gray said that the purposes of the conference were to provide critical discussion of current trends and needs, and to evaluate the methods and materials, as well as the results of recent experiments. The patterns of each conference were similar: first scholarly papers were given to the entire group, then meetings were held for administrative staff and for those dealing with reading disability from the primary grades through secondary school and college. The main theme was divided into important parts for each half day or full day of the five days of the conference. Attendance was as large as 1,200 people. The printed proceedings were unevenly popular, some having a second printing. It is impossible to estimate the influence of the scholarly papers and practical adaptations on the lives of young people during those years.

In addition to the foregoing conferences, Gray participated in numerous other reading conferences throughout the United States and Canada, always evaluating new research and practice without bias, and always suggesting experimentation and improvement of practice.

Space permits only brief reference to the numerous interpretive summaries and selected references concerning different topics published in popular professional journals, some regularly and others at intervals.

Special mention should be made of the fact that, as the first president of the International Reading Association, Gray organized the First Annual Convention, held in May 1956, with 2,300 attendees. The proceedings, *Better Readers for Our Times*, were published (483), and Gray contributed a paper to the proceedings of each of the next four conventions.

Model of Reading

During a half century of research and writing, Gray continuously attempted to identify the major components of reading so that research could be focused there. The culmination of his efforts came in a paper given at the Annual Reading Conference at the University of Chicago in June 1960, but published post-mortem (516). Although he did not call it a model of reading, it has been so called in many publications since that time. In order to appreciate the significance of this model one needs to trace Gray's concept of reading.

Before 1920, Gray wrote about oral and silent reading. Tests of each type were being developed and studies compared the limited aspects of each type, such as speed. By 1919, Gray was addressing the relationship between reading and study.

In the 1925 NSSE Yearbook, as noted earlier, Gray began to emphasize such factors as thought-getting, interpretation, extending experience, motives for reading, and a permanent interest in reading. He distinguished between recreatory and work-type reading, in all school subjects. During this period, there were sharp differences among authorities in their ideas about reading and thinking, some writers contending that broad definitions of reading were being extended into the area of thinking. But Gray always maintained that any reading without thought was a useless exercise.

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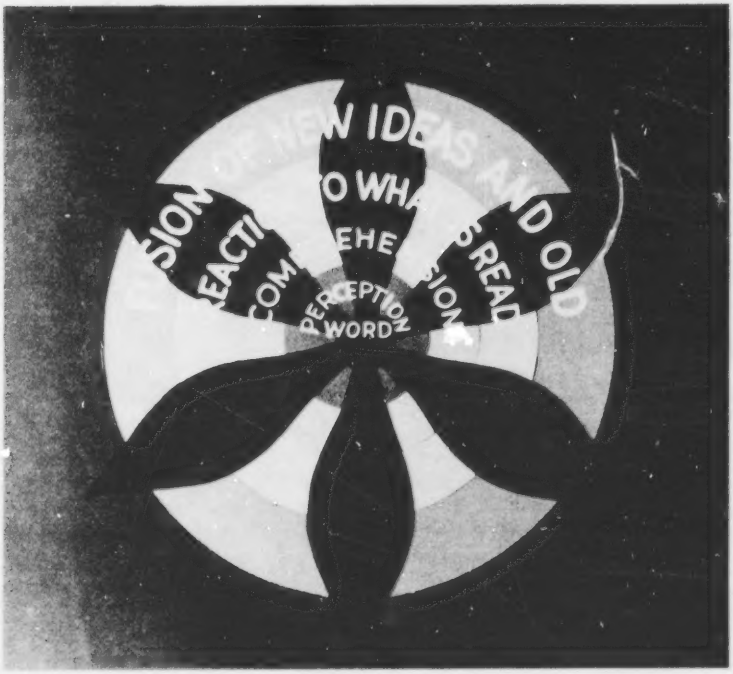
In the Thirty-Sixth NSSE Yearbook (220) Gray stated that, not only does the reader recognize essential ideas and facts, "but (he) also reflects on their significance, evaluates them critically, discovers relationships between them, and clarifies his understanding of the ideas apprehended" (p. 21). Gray then added that reading modified personality as "pupils...apply what they learn wisely..." (p. 28).

Thus the rudimentary concepts of Gray's model were taking form long before they were organized and published. Even the four major aspects—word perception, comprehension, reaction to what is read, and fusion of new ideas and old—were very general. From his research and practice, as well as from many other sources, Gray made a preliminary analysis of each of these aspects. Unfortunately, space does not permit discussion of the progress he had made up to the point when the model was published.

Other models of parts of aspects of reading had been published previously, but this one was by far the most complete. The spate of models that followed Gray's is a tribute to the breadth and depth of his understanding of reading. Of special interest was the final representation of the model (p. 23), in which the four major aspects of reading combine for different purposes and for reading efficiently in different content areas. (See Figure 1.)

Figure 1. William S. Gray's Model of Reading:
Reading for Different Purposes and in Various Fields



This model had implications for research because, as has been said, "...models tend to order and simplify knowledge...," as well as delineate what is scientifically known from what is inferred or believed. Thus the model was of incalculable value to researchers, as a means of pursuing new topics rather than just repeating old ones.

The practical value of the model was to call the attention of administrators and teachers to the complexity of reading and to enable them to identify areas of which they might have been unaware. It seems fitting that the culmination of Gray's long career should alert practitioners to improving reading at all levels, preschool to adulthood, and in the broadest phases of all behaviors. In fact, a thorough examination of this model, and of all the author did to create it, may explain why William S. Gray was often called "Mr. Reading."

Closing Remarks

At the dinner for William S. Gray's retirement, Arthur Traxler examined Gray's publications and characterized him as a "one-man book-of-the-month club." It is remarkable that the quality matched the quantity of his writings.

To this noteworthy giant in the field of reading, I dedicate this paper. It is my hope that this and future generations appreciate the professional strides made by one individual who inspired the world to carry on into the present and the future, with reading improvement his hope for the total population of the world. We will improve if we read, and heed, Gray's admonitions.

BIBLIOGRAPHY OF WRITINGS OF WILLIAM S. GRAY

William S. Gray maintained a personal file of bibliographic cards, one card each for most of the works he authored during his life. This set of cards is now maintained within the William S. Gray Collection in the University of Chicago Library. These cards were used to compile the bibliography which follows. The style used for the entries in the bibliography is, in most instances, the same as that used by Gray on his personal set of cards, although within a few entries there were minor editorial changes to assure consistency.

Two additional lists follow the list of references which were compiled from Gray's bibliographic cards. The first is a compilation of Gray's Summaries of Reading Investigations which were published from 1925 to 1959. The second is a list of instructional materials, primarily basal readers, authored by Gray and published by Scott, Foresman and Company from 1930 to 1957.

1. *Society and the Delinquent*, Illinois State Normal University, 1909, 7.
2. "Africa as a Type Study," *School Century*, VI (May, 1911), 435-438.
3. "Africa as a Type Study: Climatic Conditions," *School Century*, VI (June, 1911), 499-502.
4. "Africa as a Type Study: Vegetation, Animal Life, Population, etc.," *School Century*, VII (September, 1911), 23-25.
5. "Home Geography," *School Century*, VII (October, 1911), 74-75, 82.
6. "Physical Features and Map Making in Geography," *School Century*, VII (November, 1911), 122-123.
7. "Getting a World View in the Study of Geography," *School Century*, VII (December, 1911), 180-181, 185.
8. "Illustrative Materials in Geography Study," *School Century*, VII (January, 1912), 235-237.
9. "Preliminary Study of the Continent of North America," *School Century*, VII (February, 1912), 296-297.

10. "Geography – The Study of Specific Regions by Types," *School Century*, VII (March, 1912), 354-356.

11. "Geography: Wheat Raising – A Type Study of an American Industry," *School Century*, VII (April, 1912), 400-402.

12. "The Teaching of Place Names in Geography," *School Century*, VII (May, 1912), 454-456.

13. "Comparisons in the Teaching of Geography," *School Century*, VII (June, 1912), 525-527.

14. "Selected Bibliography upon Practical Tests of Reading Ability," *Minimum Standards and Current Practices*, 59-60. Fourteenth Yearbook of the National Society for the Study of Education, Part I, 1915.

15. *Standardized Oral Reading Paragraphs*. Grades 1-8. Bloomington, Illinois: Public School Publishing Company, 1915.

16. "Methods of Testing Reading, I and II," *Elementary School Journal*, XVI (January and February, 1916), 231-246, 281-298.

17. "Reading," *School Survey: Grand Rapids, Michigan*, Chap. IV. Grand Rapids, Michigan: Board of Education, 1916.

18. "Descriptive List of Standard Tests," *Elementary School Journal*, XVII (September, 1916), 24-34.

19. "A Study of the Emphasis on Various Phases of Reading Instruction in Two Cities," *Elementary School Journal*, XVII (November, 1916), 178-186.

20. "A Cooperative Study of Reading in Eleven Cities of Northern Illinois," *Elementary School Journal*, XVII (December, 1916), 250-265.

21. *Studies of Elementary-School Reading through Standardized Tests*. Supplementary Educational Monographs, Vol. I, No. 1. Chicago: University of Chicago, February, 1917, viii, 158.

22. "Summary of the Literature on General Methods for 1916," *Elementary School Journal*, XVII (June, 1917), 756-764.

23. "The Relation of Silent Reading to Economy in Education," *Second Report of the Committee on Minimal Essentials in Elementary School Subjects*, 17-32. Sixteenth Yearbook of the National Society for the Study of Education, Part I, 1917.

24. "Descriptive List of Standard Tests, 1917," *Elementary School Journal*, XVIII (September, 1917), 56-70.

25. "Educational Writings," Basic and Supplementary Reading Books, 1916-1917, *Elementary School Journal*, XVIII (January, 1918), 382-387.

26. "Reading," *Survey of the St. Louis Public Schools*, Vol. II, Part IV. Yonkers-on-Hudson, New York: World Book, 1918.

27. "Objective Studies of the Achievements of Training-School and Public-School Pupils in the Freshman Year of the High School," *Eighteenth Yearbook of the National Society for the Promotion of Education*, Part I (1918), 273-291. See also *Elementary School Journal*, XIX (September, 1918), 291-310 (with George N. Cade, senior author).

28. "The Work of Elementary-School Principals," *Elementary School Journal*, XIX (September, 1918), 24-35.

29. "The Use of Tests in Improving Instruction," *Elementary School Journal*, XIX (October, 1918), 121-142.

30. "The Relation between Study and Reading," *Addresses and Proceedings of the National Education Association*, LVII (1919), 580-586.

31. "Principles of Method in Teaching Reading as Derived from Scientific Investigations," *Fourth Report of the Committee on Economy of Time in Education*, 26-51. Eighteenth Yearbook of the National Society for the Study of Education, Part II, 1919.

32. "Reading in the Elementary School of Indianapolis," *Elementary School Journal*, XIX (January, February, March, April, 1919), 336-353, 419-444, 506-531, 608-627.

33. "The Technique of Supervising High-School Practice Teaching," *School Review*, XXVII (September, 1919), 512-522.

34. "Methods of Improving the Technique of Teaching," *Elementary School Journal*, XX (December, 1919), 263-275.

35. Review of *A Survey of Commercial Education in the Public High Schools of the United States*, by Leverett S. Lyon. *Journal of Educational Research*, I (January, 1920), 64-65.

36. Review of *Educational Legislation and Administration in the State of New York from 1777 to 1850*, by Elsie Garland Hobson. *Journal of Educational Research*, I (January, 1920), 65.

37. "Value of Informal Tests of Reading Accomplishment," *Journal of Educational Research*, I (February, 1920), 103-111.

38. "Rating Scales, Self-Analysis, and the Improvement of Teaching," *School Review*, XXIX (January, 1921), 49-57.

39. "The Use of a Time Record Blank in the Standardization and Supervision of Student-Teaching Courses," *Studies in Education*, 39-48. Educational Monographs, The Society of College Teachers of Education, X, 1921. See also *Educational Administration and Supervision*, VII (March, 1921), 121-132.

40. "The Diagnostic Study of an Individual Case in Reading," *Elementary School Journal*, XXI (April, 1921) 577-594.

41. Review of *Essentials of Good Teaching* by E.A. Turner. New York: D.C. Heath and Co., 1920. 265 pp. *Journal of Educational Research*, III (May, 1921), 390-391.

42. "Diagnostic and Remedial Steps in Reading," *Journal of Educational Research*, IV (June, 1921), 1-15.

43. "Individual Difficulties in Silent Reading in the Fourth, Fifth, and Sixth Grades," *Report of the Society's Committee on Silent Reading*, 39-53. Twentieth Yearbook of the National Society for the Study of Education, Part II, 1921.

44. Review of *How to Measure* by G.M. Wilson and Kremer J. Hoke. New York: Macmillan Co., 1920. 285 pp. *Journal of Educational Research*, IV (September, 1921), 147.

45. Review of *State Maintenance for Teachers in Training*, by Walter Scott Hertzog. *Elementary School Journal*, XXII (December, 1921), 311.

46. *Remedial Cases in Reading: Their Diagnosis and Treatment*. Supplementary Educational Monographs, No. 22. Chicago: University of Chicago, June, 1922, viii, 208 (with the cooperation of Delia Kibbe, Laura Lucas, and Lawrence W. Miller).

47. "Standards for Professional Approval," *Studies in Education*, 83-90. Educational Monographs, The Society of College Teachers of Education, XI, 1922.

48. "The Techniques of Diagnosing Individual Cases in Reading," *Ninth Conference on Educational Measurements*, Bulletin of the Extension Division, Indiana University, VII (August, 1922), 16-25.

49. "Types of Remedial Cases," *Ninth Conference on Educational Measurements*, Bulletin of the Extension Division, Indiana University, VII (August, 1922), 26-35.

50. "Remedial Measures in Reading," *Ninth Conference on Educational Measurements*, Bulletin of the Extension Division, Indiana University, VII (August, 1922), 36-42.

51. *Standardized Oral Reading Check Tests*. Grades 1-2, 2-4, 4-7, 6-8. Bloomington, Illinois: Public School Publishing Company, 1923.

52. "The Importance of Intelligent Silent Reading," *Elementary School Journal*, XXIV (January, 1924), 348-356.

53. "Problems for Scientific Investigation in Elementary Education," *Elementary School Journal*, XXIII (May, 1924), 654-663.

54. "The Scientific Determination of a Valid Program of Reading Instruction," *The Elementary School Curriculum*, 105-109. Department of Superintendence, Second Yearbook, 1924.

55. "Case Studies of Reading Deficiencies in Junior High Schools," *Journal of Educational Research*, X (September, 1924), 132-140.

56. "The Professional Career of Samuel Chester Parker," *Elementary School Journal*, XXV (September, 1924), 10-19.

57. "Reading," *Research in Constructing the Elementary School Curriculum*, 152-204. Department of Superintendence, Third Yearbook, February, 1925.

58. Review of *The Training of Teachers in England and Wales*, by Lance G.E. Jones. *Elementary School Journal*, XXV (June, 1925), 787-788.

59. *Report of the National Committee on Reading*, The Twenty-Fourth Yearbook of the National Society for the Study of Education, Part I. 1925, x, 340.

60. *Summary of Investigations Relating to Reading*, Supplementary Educational Monographs, No. 28. Chicago: University of Chicago, June, 1925, viii, 276.

61. Review of *Picture-Story Reading Lessons*, by Stuart A. Courtis and Nila Banton Smith. *Elementary School Journal*, XXVI (September, 1925), 67-69.

62. Review of *Jingles: A Reader for Beginners*, adapted by Alice Rose Power. *Elementary School Journal*, XXVI (November, 1925), 238.

63. Review of *The Elson Foundation Unit: A Course of Study Manual*, by William H. Elson and Lura E. Runkel. *Elementary School Journal*, XXVI (November, 1925), 237-238.

64. Review of *The Field-Martin Primer*, by Walter Taylor Field and Katharine Martin. *Elementary School Journal*, XXVI (December, 1925), 316-317.

65. Review of *The School Survey*, by Jesse B. Sears. *Elementary School Journal*, XXVI (December, 1925), 310-311.

66. Review of *One Hundred Ways of Teaching Silent Reading*, by Nila Banton Smith. *Elementary School Journal*, XXVI (January, 1926), 396-397.

67. Review of *The Hale Literary Readers: Book One, Book Two, Book Three*, by Edward Everett Hale. *Elementary School Journal*, XXVI (January, 1926), 395-396.

68. Review of *The Pathway to Reading*, by Bessie Blackstone Coleman, Willis L. Uhl, and James Fleming Hosie. *Elementary School Journal*, XXVI (February, 1926),472-473.

69. "Summary of Reading Investigations, July 1, 1924 to June 30, 1925," *Elementary School Journal*, XXVI (February, March, April, May, 1926), 449-459, 507-518, 574-584, 662-673.

70. Review of *The Happy Children Readers*, by Mary E. Pennell and Alice M. Cusack. *Elementary School Journal*, XXVI (March, 1926), 556-557.

71. "Reading Problems that Challenge Attention," *Elementary English Review*, III (April, 1926), 105-107.

72. Reviews of *Wag and Puff - A Primer; Surprise Stories – A First Reader; First Grade Manual*, by Marjorie Hardy. *Elementary School Journal*, XXVI (June, 1926), 796-797.

73. *A Survey of the Winnetka Public Schools* under a Subvention from the Commonwealth Fund. Bloomington, Illinois: Public School Publishing Company, 1926, 136 (with Carleton Washburne, senior author, and Mabel Vogel).

74. "Training and Experience That Prepare for Reading," *Childhood Education*, III (January, 1927), 210-214.

75. Review of *Children's Interests in Reading*, by Arthur Melville Jordan. *Elementary School Journal*, XXVII (February, 1927), 473-474.

76. "Summary of Reading Investigations July 1, 1925 to June 30, 1926," *Elementary School Journal*, XXVII (February and March, 1927), 456-466, 495-510.

77. "A Study of Ways and Means of Reorganizing and Improving Instruction in Reading," *Journal of Educational Research*, XV (March 1927), 166-175.

78. "Unique Opportunities of Teachers Colleges," *Addresses and Proceedings of the National Education Association*, LXV (1927), 891-898. See also *Yearbook of the American Association of Teachers Colleges* (1927), 55-62 (with George N. Cade, senior author).

79. "Primary Readings," *Classroom Teacher*, Vol. II, 39-386. Chicago: The Classroom Teacher, Inc., 1927 (with Laura Zirbes).

80. "Reading in the Intermediate Grades," *Classroom Teacher*, Vol. II, 81-282. Chicago: The Classroom Teacher, Inc., 1927 (with Laura Zirbes).

81. "Junior High School English," *The Junior High School Curriculum*, 87-146. Department of Superintendence, Fifth Yearbook, 1927 (with Thomas W. Gosling, chairman, Thomas H. Briggs, Howard R. Driggs, Ernest Horn, Rollo L. Lyman Laura McGregor, Charles S. Pendleton, Matthew H. Willing, and Zilla E. Wiswall).

82. Review of *Supervision and Teaching of Reading*, by Julia M. Harris, H.L. Donovan, and Thomas Alexander. *Elementary School Journal*, XXVIII (January, 1928), 389-390.

83. Review of *The Improvement of Reading*, by Arthur I. Gates. *Elementary School Journal*, XXVIII (January, 1928), 388-389.

84. Review of *The Teaching and Supervision of Reading*, by Arthur S. Gist and William A. King. *Elementary School Journal*, XXVIII (January, 1928), 390.

85. "Summary of Reading Investigations, July 1, 1925 to June 30, 1927," *Elementary School Journal*, XXVIII (February, March, and April, 1928), 443-459, 496-510, 587-602.

86. Review of *An Evaluation of Extensive and Intensive Teaching of Literature: A Years Experiment in the Eleventh Grade*, by Nancy Gillmore Coryell. *Elementary School Journal*, XXVIII (May, 1928), 714.

87. Review of *Reading and Word Meanings*, by Edward William Dolch. *Elementary School Journal*, XXVIII (May, 1928), 715.

88. Review of *An Objective Determination of Stories and Poems for the Primary Grades*, by Mary Ethel Nesmith. *Elementary School Journal*, XXVIII (June, 1928), 797-798.

89. "Types of Teaching Reading," *Pennsylvania School Journal*, LXXVII (October, 1928), 84-86.

90. "Educational Readjustments at the Junior College Level," American Association of Junior Colleges, Ninth Annual Meeting, Fort Worth, Texas, December 1928, 39-48.

91. "The Importance of Reading in American Life," *School Progress* (a journal published by the State Teachers College, Mankato, Minnesota), X (January, 1929), 2-9.

92. Review of *Comparative Studies of Current Practice in Reading with Techniques for the Improvement of Teaching*, by Laura Zirbes. *Elementary School Journal*, XXIX (February, 1929), 472-473.

93. Review of *New Methods in Primary Reading*, by Arthur I. Gates. *Elementary School Journal*, XXIX (February, 1929), 468-469.

94. "Summary of Reading Investigations, July 1, 1927 to June 30, 1928," *Elementary School Journal*, XXIX (February and March, 1929), 443-457, 496-507.

95. *Current Educational Readjustments in Higher Education*. Seventeenth Yearbook of the National Society of College Teachers of Education. Chicago: University of Chicago Press, 1929, vi, 178.

96. *The Junior College Curriculum*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. I. Chicago: University of Chicago Press, 1929, viii, 262 (Compiler and Editor).

97. "Objective Techniques in Supervising Instruction in Reading," *Scientific Method in Supervision*, 181-192. Second Yearbook of the National Conference of Supervisors and Directors of Education, 1929.

98. *The Reading Interests and Habits of Adults*. New York: Macmillan, 1929, xiv, 306 (with Ruth Munroe).

99. "Educational Readjustments at the Junior College Level," *School and Society*, XXX (August 3, 1929), 135-143.

100. Review of *Survey of Higher Education for the United Lutheran Church in America*, Vols. I, II, and III, by R.J. Leonard, E.S. Evenden, and F.B. O'Rear. *Elementary School Journal*, XXX (December, 1929), 314-316.

101. "Working Problems in Reading," *Chicago Schools Journal*, XII (January, 1930), 190-191.

102. "Summary of Reading Investigations July 1, 1928 to June 30, 1929," *Elementary School Journal*, XXX (February and March, 1930), 450-466, 496-509.

103. *Lecture Notes on Education 390*, (given in University College, Autumn Quarter, 1929), published for distribution among teachers of District No. 9, Chicago, Illinois, 1930.

104. *Manual for Teachers of Adult Illiterates*. Washington, D.C.: National Advisory Committee on Illiteracy, Bulletin No. 2, 1930, 239. (Revised in 1934 under the title, *Manual for Teachers of Adult Elementary Students*.)

105. *The Training of College Teachers*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. II. Chicago: University of Chicago Press, 1930, viii, 242 (Compiler and Editor).

106. "Survey of Current Methods in Training Prospective College Teachers," *The Training of College Teachers*, 80-90. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. II, 1930.

107. "Introduction" to *Reading Activities in the Primary Grades* by Grace E. Storm and Nila B. Smith, vii, viii. Boston: Ginn, 1930.

108. "Notable Reforms in Teaching Reading," *Journal of the National Education Association*, XIX (December, 1930), 287-288.

109. "The Importance of Intelligent Reading and of Library Facilities," *University of North Carolina Extension Bulletin*, X (December, 1930), 30-39.

110. "Problems of Teaching Reading in Fourth, Fifth, and Sixth Grades," *South Dakota Education Association Journal*, VI (January, 1931), 290.

111. "Reading as a School Subject," *Journal of the National Education Association*, XX (January, 1931), 37-38.

112. "Guidance in Reading," *Journal of the National Education Association*, XX (February, 1931), 53-54.

113. Review of *Farm Children: A Investigation of Rural Child Life in Selected Areas of Iowa*, by Bird T. Baldwin, Eva A. Fillmore, and Lora Hadley. *Elementary School Journal*, XXXI (February, 1931), 474-475.

114. Review of *Some Methods of Teaching in Six Representative State Teachers Colleges of the United States*, by Paul G. Chandler. *Elementary School Journal*, XXXI (February, 1931), 470.

115. "The Relation of the Junior College Curriculum to General Education," *Proceedings of the Fifteenth Annual Meeting of the Department of Secondary School Principals*, Bull. No. XXXV (February, 1931), 171-181. (For abstract see *Addresses and Proceedings of the National Education Association* LXIX (1931), 602-604).

116. "Unique Problems of Reading Instruction," *South Dakota Education Association Journal*, VI (February, 1931), 331-335.

117. "Enjoyment of Good Literature," *Journal of the National Education Association*, XX (March, 1931), 89-90.

118. Review of *Teaching the Child to Read: Practical Studies in Reading Method*, by Samuel W. Patterson. *Elementary School Journal* XXXI (March, 1931), 547-548.

119. "Summary of Reading Investigations July 1, 1929 to June 30, 1930," *Elementary School Journal*, XXXI (March and April, 1931), 531-546, 592-606.

120. Review of *Report of the Survey of the Schools of Holyoke, Massachusetts*, by the Institute of Educational Research, Division of Field Studies, Teachers College, Columbia University. *Elementary School Journal*, XXI (March, 1931), 557.

121. "Permanent Interest in Reading," *Journal of the National Education Association*, XX (April, 1931), 137-138.

122. "The New Education Plan at the University of Chicago," *Zeta News*, XVI (February, 1931), 3-12, and *School and Society*, XXXIII (April 18, 1931), 513-520. (For abstract see *Addresses and Proceedings of the National Education Association*, LXIX (1931), 426-428.

123. "Remedial Cases in Reading," *Journal of the National Education Association*, XX (May, 1931), 163-164.

124. "Reading Deficiencies in Secondary Schools," *Journal of the National Education Association*, XX (June, 1931), 197-198.

125. *Recent Trends in American College Education*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. III. Chicago: University of Chicago Press, 1931, x, 254 (Compiler and Editor).

126. "Implications for Teacher-Training of the New Educational Plan at the University of Chicago," *The Teachers College Journal*, III (September, 1931), 50-59.

127. "Nature of Professional Courses in Teacher-Training Institutes," *Teachers College Journal*, III (September, 1931), 59-66.

128. "Reading," *Special Methods in the Elementary School*. Review of Educational Research, I (October, 1931), 247-260.

129. Review of *Interest and Ability in Reading* by Arthur I Gates. *Elementary School Journal*, XXXII (November, 1931), 233.

130. "New Emphases in College Education," *Proceedings of the Eighth Annual Educational Conference, University of Kentucky*. Bulletin of the Bureau of School Service, College of Education, University of Kentucky, Vol. IV, December, 1931, 5-15.

131. "The Reorganization of Our Colleges to Meet New Problems," *Proceedings of the Eighth Annual Educational Conference, University of Kentucky*. Bulletin of the Bureau of School Service, College of Education, University of Kentucky, Vol. IV, December, 1931, 28-37.

132. "The Reorganization at the Junior College Level in the University of Chicago," *Proceedings of the Eighth Annual Educational Conference, University of Kentucky*. Bulletin of the Bureau of School Service, College of Education, University of Kentucky, Vol. IV, December, 1931, 46-48.

133. "Reading," *Psychology of the School Subjects*, Review of Educational Research, I (December, 1931), 328-336.

134. "Reading," *Los Angeles Educational Research Bulletin*, IX (January, 1932), 58-61.

135. Review of *Reading for Public School Administrators*, by Arthur I. Gates. *Elementary School Journal*, XXXII (January, 1932), 392.

136. "Reading and Literature," *Special Methods on High-School Level*, Review of Educational Research, II, (February, 1932), 29-34.

137. "Summary of Reading Investigations, I, II, III," *Elementary School Journal*, XXXII (February, March, April, 1932), 447-463, 510-587, 587-594.

138. "Fundamentals in Silent Reading," *Elementary English Review*, IX (April, 1932), 95-98.

139. Review of *The Reading Abilities of College Students*, by Alvin C. Eurich. *The School Review*, XL (April, 1932), 311-312.

140. "After Literacy – What?" *School and Society*, XXXV (May 7, 1932), 609-613.

141. Review of *Supervision of Religious Education*, by Ernest John Chave. *Elementary School Journal*, XXXII (June, 1932), 789-791.

142. *The Opportunity Schools of South Carolina: An Experimental Study*. New York: American Association for Adult Education, 1932, iii, 141 (with Wil L. Gray and J.W. Tilton).

143. *Provision for the Individual in College Education*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. IV. Chicago: University of Chicago Press, 1932, viii, 262 (Compiler and Editor).

144. "The Academic and Professional Preparation of Teachers," *Elementary School Journal*, XXXIII (September, 1932), 33-45.

145. Review of *A Practical Reader for Adults*, by Josephine Dwight Mason and Gertrude E. O'Brien. *Elementary School Journal*, XXXIII (September, 1932), 74-75.

146. "Why Children Fail in Reading," *Understanding the Child*, II (October, 1932), 16-18.

147. Review of *Children Who Cannot Read*, by Marion Monroe. *Childhood Education*, IX (October, 1932), 45-46.

148. Review of *Problems in the Training of Certain Special-Class Teachers*, by Louis M. Schleier. *Elementary School Journal*, XL (October, 1932), 150-152.

149. Review of *Prescription and Election in Elementary-School Teacher-Training Curricula in State Teachers Colleges*, by Edward C. Class. *Elementary School Journal*, XXXIII (December, 1932), 310-311.

150. "Provision for Individual Differences in Reading Efficiency," *Provision for the Individual in College Education*, 144-158. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. IV, 1932.

151. "Current Practices in Teaching Reading as They Affect the Development of Desirable Types of Reading Achievement," *Bulletin of the Association for Childhood Education*, 8-16. Washington, D.C., 1932.

152. "Reading in School and at Home," *New Wonder World*, IX, 219-222. Chicago: George L. Shuman and Co., 1932.

153. "Remedial Cases in Reading," *Addresses Delivered During the Eighteenth Annual Schoolmen's Week*, Educational Research Bulletin, No. 3, 7-8. College of Education, University of Minnesota, 1932.

154. "Notable Reforms in Teaching Reading," *Addresses Delivered During the Eighteenth Annual Schoolmen's Week*, Educational Research Bulletin, No. 3, 9-10. College of Education, University of Minnesota, 1932.

155. "The Nature of Professional Courses for Teachers," *Addresses Delivered During the Eighteenth Annual Schoolmen's Week*, Educational Research Bulletin, No. 3, 39-42. College of Education, University of Minnesota, 1932.

156. "Summary of Reading Investigations July 1, 1931 to June 30, 1932," *Journal of Educational Research*, XXVI (February, 1933), 401-424.

157. "Needed Readjustments in Teacher Training," *Zeta News*, XVIII (February, 1933), 9-13.

158. Review of *The Experimental Study of Reading*, by M.D. Vernon. *Elementary School Journal*, XXXIII (March, 1933), 553-554.

159. Review of *The Effect of Color on Visual Apprehension and Perception*, by Miles A. Tinker. *Sight-Saving Review*, III (March, 1933), 76-78. New York: National Society for the Prevention of Blindness.

160. Review of *Making the Most of Books*, by Leal A. Headley. *Journal of Higher Education*, IV (April, 1933), 221-222.

161. Review of *The Administration of Student Personnel Services in Teacher-Training Institutions of the United States*, by Marion Ernest Townsend. *Elementary School Journal*, XXXIII (June, 1933), 794-796.

162. *Improving Instruction in Reading: An Experimental Study*. Supplementary Educational Monograph No. 40. Chicago: University of Chicago, 1933, xiv, 226 (with Gertrude Whipple).

163. "Catching Up with Literacy," *Addresses and Proceedings of the National Educational Association*, LXXI (1933), 280-281.

164. *Needed Readjustments in Higher Education*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. V. Chicago: University of Chicago Press, 1933, viii, 284 (Compiler and Editor).

165. "New Issues in Teaching Reading," *Elementary English Review*, X (September, 1933), 161-164, 182.

166. "Selected References on Elementary-School Instruction: Reading," *Elementary School Journal*, XXXIV (October, 1933), 130-134. See also *Selected References in Education, 1933*, 146-150. Supplementary Educational Monographs, No. 41, 1934.

167. "Selected References on Teacher Education," *Elementary School Journal*, XXXIV (December, 1933), 298-306. See also *Selected References in Education, 1933*, 182-190. Supplementary Educational Monographs, No. 41, 1934.

168. "The Use of Student Judgments in a Supervisory Experiment: Investigations in the Improvement of College Instruction," *Instructional Problems in the University*, 142-146. Vol. IV of *The University of Chicago Survey*. Chicago: University of Chicago Press, 1933.

169. "Evidence of the Need of Capable Instructional Leadership," *Elementary School Journal*, XXXIV (February, 1934), 417-426. See also *Addresses and Proceedings of the National Education Association*, LXXI (1933), 690-692. (abstract)

170. Review of *An Orientation Course in Education*, by Joseph S. Butterweck and J. Conrad Seegers. *Journal of Educational Research*, XXVII (March, 1934), 536-537.

171. "Reading" *Curriculum Investigations at the Elementary and Secondary-School Levels*. Review of Educational Research, IV (April, 1934), 135-138, 214-215.

172. "Summary of Reading Investigations July 1, 1932 to June 30, 1933," *Journal of Educational Research*, XXVII (April, 1934), 564-591.

173. "The Teaching of Silent Reading During the Next Decade," *Elementary English Review*, XI (April, 1934), 91-93, 118.

174. Review of *Philosophies of Education Current in the Preparation of Teachers in the United States*, by Francis Edwin Peterson. *Elementary School Journal*, XXXIV (May, 1934), 711-713.

175. Review of *A Practical Reader for Adults, Books I, II, and III*, by Josephine Dwight Mason and Gertrude E. O'Brien. *Elementary School Journal*, XXXIV (May, 1934), 717.

176. "Recent Reforms in Reading and Needed Expansions," *Texas Outlook*, XVIII (May, June, 1934), 34-36, 50-52.

177. Review of *Education and Certification of Elementary Teachers*, by Frank P. Bachman. *Elementary School Journal*, XXXIV (June, 1934), 795-796.

178. "Controversial Issues," *The Activity Movement*, 167-182. Thirty-Third Yearbook of the National Society for the Study of Education, Part II, 1934 (with Adelaide M. Ayer).

179. "Statements by Various Members of the Committee, IV," *The Activity Movement*, 191-194. Thirty-Third Yearbook of the National Society for the Study of Education, Part II, 1934.

180. "Recent Reforms in Reading and Needed Expansions," *Educating for the New Age*. Proceedings of the Fourth Annual Teacher-Training Conference, North Texas State Teachers College, Vol. IV, 18-23. Denton, Texas: North Texas State Teachers College, 1934.

181. "The Four Year Curriculum for Elementary School Teachers," *Educating for the New Age*. Proceedings of the Fourth Annual Teacher-Training Conference, North Texas State Teachers College, Vol. IV, 46-49. Denton, Texas: North Texas State Teachers College, 1934.

182. *General Education: Its Nature, Scope, and Essential Elements*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. VI. Chicago: University of Chicago Press, 1934, viii, 188 (Compiler and Editor).

183. Review of *The Case Method Technique in Professional Training*, by D. Henryetta Sperle. *Elementary School Journal*, XXXV (September, 1934), 74-75.

184. "Controversial Issues Relating to the Activity Curriculum," *Progressive Education*, XI (October, 1934), 334-339.

185. *Opportunities in the Field of Education*. University of Chicago Vocational Guidance Series, No. I, 1934, 21.

186. "Selected References on Elementary-School Instruction—Reading," *Elementary School Journal*, XXXV (October, 1934), 131-135. See also *Selected References in Education, 1934*, 150-154. Supplementary Educational Monographs, No. 42, 1935.

187. "Adult Education," *Zeta News*, XX (December, 1934), 4-7. Chicago: Zeta Chapter, Phi Delta Kappa, University of Chicago.

188. "Selected References on Teacher Education," *Elementary School Journal*, XXXV (December, 1934), 298-306. See also *Selected References in Education, 1934*, 181-189. Supplementary Educational Monographs, No. 42, 1935.

189. "Factors Which Contribute to Difficulty of Reading Material," *Addresses and Proceedings of the National Education Association*, LXXII (1934), 378-379. (abstract)

190. "Reading." *Special Methods in the Elementary School and Psychology of the School Subjects*. Review of Educational Research, V (February, 1935), 54-69, 111-114 (with the assistance of Arthur I. Gates, Ernest Horn, and G.A. Yoakam).

191. "Summary of Reading Investigations July 1, 1933 to June 30, 1934." *Journal of Educational Research*, XXVIII (February, 1935), 401-424.

192. "Problems of Reading Disabilities Requiring Scientific Study." *Elementary English Review*, XII (April, 1935), 96-100.

193. *What Makes a Book Readable*. Chicago: University of Chicago Press, 1935, xviii, 358 (with Bernice E. Leary).

194. "Principles of Curriculum Construction for the Education of Teachers." *The Education of Teachers*, 72-126. Twenty-Third Yearbook of the National Society of College Teachers of Education. Chicago: University of Chicago Press, 1935 (with Florence B. Stratemeyer and Alexander Thomas).

195. "The Place of Oral Reading in an Improved Program of Reading." *The Application of Research Findings to Current Educational Practices*, 91-98. Official Report of the American Educational Research Association, 1935.

196. *The Academic and Professional Preparation of Secondary School Teachers*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. VII. Chicago: University of Chicago Press, 1935, x, 234 (Compiler and Editor).

197. "Reports Relating to the General and Specialized Subject Matter Preparation of Secondary School Teachers, VII: Trends in the Subject-Matter Preparation of Secondary-School Teachers." *North Central Association Quarterly*, X (October, 1935), 250-255.

198. "Selected References on Teacher Education." *Elementary School Journal*, XXXVI (December, 1935), 299-306. See also *Selected References in Education, 1935*, 191-198. Supplementary Educational Monographs, No. 43, 1936.

199. "Selected References on Elementary-School Instruction, II. Reading." *Elementary School Journal*, XXXVI (October, 1935), 129-135. See also *Selected References in Education, 1935*, 156-162. Supplementary Educational Monographs, No. 43, 1936.

200. "Summaries of Current Practice in the Teaching of Handwriting, Phonics, and Spelling." *Childhood Education*, XII (January, 1936), 173-177. Personal contribution, section on phonics (with Frank N. Freeman, senior author, and Frederick S. Breed).

201. Review of *American Reading Instruction*, by Nila Banton Smith. *Elementary School Journal*, XXXVI (January, 1936), 389-391.

202. "Summary of Reading Investigations July 1, 1934 to June 30, 1935." *Journal of Educational Research*, XXIX (February, 1936), 407-432.

203. Review of *National Survey of the Education of Teachers*, by E.S. Evenden and others. *School Review*, XLIV (February, 1936), 149-153.

204. "The Place of Oral Reading in an Improved Program of Reading," *Elementary School Journal*, XXXVI (March, 1936), 517-526.

205. "Survey of the Teaching of English in Puerto Rico." Mimeographed report addressed to Dr. José Padin, Commissioner of Education, San Juan, P.R., March 25, 1936, 10.

206. "The Use of Tests in Diagnosis and Remedial Work, with Special Reference to Reading and Study Habits," Report of Thirteenth Annual Meeting of the American College Personnel Association (1936), 22-27.

207. "Reading Difficulties in College," *Journal of Higher Education*, VIII (October, 1936), 356-362.

208. "An Evaluation of the Yearbook: The National Conference on Research in Elementary School English," *Elementary English Review*, XIII (October, 1936), 228-233.

209. Review of *The Nature of the Supervision of Student Teachers in Universities Using Co-operating Public High Schools*, by Ralph F. Strebel. *Elementary School Journal*, XXXVIII (November, 1936), 232-234.

210. "Selected References on Teacher Education," *Elementary School Journal*, XXXVII (December, 1936), 302-307. See also *Selected References in Education, 1936*, 197-202. Supplementary Educational Monographs, No. 44, 1937.

211. *Tests and Measurements in Higher Education*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. VIII. Chicago: University of Chicago Press, 1936, viii, 238 (Compiler and Editor).

212. "Selected References on Elementary-School Instruction, II. Reading," *Elementary School Journal*, XXXVII (October, 1936), 133-137. See also *Selected References in Education, 1936*, 165-169. Supplementary Educational Monographs, No. 44, 1937.

213. "The Nature and Organization of Basic Instruction in Reading," *The Teaching of Reading: A Second Report*, 65-132. Thirty-Sixth Yearbook of the National Society for the Study of Education, Part I, 1937.

214. "New Concepts for Reading," *Nation's Schools*, III (March, 1937), 35.

215. "Curriculum Investigations: F. Reading," *Review of Educational Research*, VII (April, 1937), 139-142, 199-201.

216. "Summary of Reading Investigations July 1, 1935 to June 30, 1936," *Journal of Educational Research*, XXX (April, 1937), 553-576.

217. "Reading for Leisure in the New Age," *National Elementary School Principal*, XVI (April, 1937), 132-139.

218. "Desirable Trends in the Teaching of Reading," *Childhood Education*, XIII (May, 1937), 414-416.

219. "The Teaching of Reading: A Second Report," *Elementary School Journal*, XXXVII (May, 1937), 688-694.

220. *The Teaching of Reading: A Second Report*. The Thirty-Sixth Yearbook of the National Society for the Study of Education, Part I, 1937, viii, 442.

221. Review of *Better Primary Reading*, by Clarence R. Stone. *Elementary School Journal*, XXXVIII (September, 1937), 73-74.

222. "Selected References on Elementary-School Instruction, II. Reading," *Elementary School Journal*, XXXVIII (October, 1937), 131-136. See also *Selected References in Education, 1937*, 167-172. Supplementary Educational Monographs, No. 46, 1938.

223. "Progress in the Study of Readability," *Library Trends*, 237-254. The University of Chicago Studies in Library Science. Chicago: University of Chicago Press, 1937.

224. *Current Issues in Higher Education*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. IX. Chicago: University of Chicago Press, 1937, viii, 154 (Compiler and Editor).

225. "The Preparation of Teachers of Chemistry," *Journal of Chemical Education*, XIV (October, 1937), 466-471.

226. "Reading," *Special Methods and Psychology of the Elementary-School Subjects*, Review of Educational Research, VII (December, 1937), 493-507, 562-567 (with the cooperation of Donald D. Durrell, Arthur I. Gates, Ernest Horn, and Paul McKee).

227. "Selected References on Teacher Education," *Elementary School Journal*, XXXVIII (December, 1937) 296-305. See also *Selected References in Education, 1937*, 201-210. Supplementary Educational Monographs, No. 46, 1938.

228. "Recent Developments in the Reading Clinic," *Zeta News*, XXIII (January, 1938), 11-12. Chicago: Zeta Chapter, Phi Delta Kappa, University of Chicago.

229. "The Nature and Extent of the Reading Problem in American Education," *Educational Record Supplement*, (January, 1938), 87-104.

230. "Recent Developments in the Preparation of Teachers," *Zeta News*, XXIII (January, 1938), 9-10. Chicago: Zeta Chapter, Phi Delta Kappa, University of Chicago.

231. Review of *Teaching High-School Students to Read: A Study of Retardation in Reading*, by Stella S. Center and Gladys L. Persons. *Chicago Schools Journal*, XIX (January-February, 1938), 137-138.

232. "Summary of Reading Investigations July 1, 1936 to June 30, 1937," *Journal of Educational Research*, XXXI (February, 1938), 401-434.

233. "Contributions of Research to Special Methods: Reading," *The Scientific Movement in Education*, 99-106. Thirty-Seventh Yearbook of the National Society for the Study of Education, Part II, 1938.

234. "The Place of the Library in the New Education," *Alumni Quarterly* (Illinois State Normal University), XXVII (February, 1938), 5-7.

235. "The Importance of a Meaning Vocabulary in Reading," *Service for School Executives*, I (March, 1938), 2, 4.

236. "Some Problems in Elementary School Reading," *Supervisor's Notebook*, IV (March, 1938), 1-4.

237. "Preparation Recommended for Secondary School Teachers," *North Central Association Quarterly*, XI (January, 1937), 281-288. See also "Recommendation of School Officers and Teachers," *North Central Association Quarterly*, XII (April, 1938), 505-512.

238. "Recent Changes in Academic Curriculums for Secondary School Teachers," *North Central Association Quarterly*, XII (April, 1938), 486-490. See also Report of the Committee on the Subject-Matter Preparation of Secondary School Teachers, *Inadequacies in the Subject-Matter Preparation of Secondary-School Teachers and Suggestions for Their Correction*, 486-490. Ann Arbor, Michigan: North Central Association Quarterly.

239. *Inadequacies in the Subject-Matter Preparation of Secondary-School Teachers and Suggestions for their Correction*. Final Report of the Committee on the Subject Matter Preparation of Secondary School Teachers. Reprint from the *North Central Association Quarterly*, XII (April, 1938), 438-519.

240. "Foreword" to *Subject Index to Readers*, by Eloise Rue, iii, iv. Chicago: American Library Association, 1938.

241. *The Development of Meaning Vocabularies in Reading*. Publications of the Laboratory Schools of the University of Chicago, No. 6. Chicago: University of Chicago, 1938, xii, 140 (with Eleanor Holmes).

242. *The Preparation and In-Service Training of College Teachers*. Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. X. Chicago: University of Chicago Press, 1938, viii, 230 (Compiler and Editor).

243. "Clinics for Pupils Deficient in Fundamental Subjects," *Proceedings of the Seventh Annual Conference for Administrative Officers of Public and Private Schools*, 137-149. Chicago: University of Chicago Press, 1938.

244. Review of *Durrell-Sullivan Reading Capacity and Reading Achievement Tests*, in *The 1938 Mental Measurements Yearbook* (Oscar K. Buros, Editor), 127-128. New Brunswick: Rutgers University Press, 1938.

245. "Selected References on Elementary-School Instruction. II. Reading," *Elementary School Journal*, XXXIX (October, 1938), 129-133. See also *Selected References in Education, 1938*, 160-164. Supplementary Educational Monographs, No. 47, 1939.

246. "Selected References on Teacher Education," *Elementary School Journal*, XXXIX (December, 1938), 298-307. See also *Selected References in Education, 1938*, 196-205. Supplementary Educational Monographs, No. 47, 1939.

247. "Development of Meaning Vocabularies with Special Reference to Reading," *Vocabulary Problems in the Elementary School: A Digest of Current Research*, 55-60. Seventh Annual Research Bulletin of the National Conference on Research in English, 1939. See also *Elementary English Review*, XVII (February, 1940), 71-76.

248. "Meaning Vocabularies in High School," *Modern Teaching*, IV (February 15, March 1, 1939), 39-41, 43-45.

249. "Summary of Reading Investigations July 1, 1937 to June 30, 1938," *Journal of Educational Research*, XXXII (March, 1939), 491-517.

250. "Reading Ability and Study Habits," *Suggested Studies in Secondary Education: A List of Problems for Research*, 84-85. Washington, D.C.: Civic Education Service, 1939.

251. "Reading," *Child Development and the Curriculum*, 185-209. Thirty-Eighth Yearbook of the National Society for the Study of Education, 1939.

252. "The Language Arts – Reading," *The Implications of Research for the Classroom Teacher*, 128-141. Joint Yearbook of the American Educational Research Association and the Department of Classroom Teachers, 1939.

253. Review of *Redirecting Teacher Education*, by Goodwin Watson, Donald P. Cottrell, and Esther M. Lloyd-Jones. *Elementary School Journal*, XXXIX (June, 1939), 791-793.

254. *The Teaching of Reading in the Elementary and Secondary Schools of the State of New York*. New York: The Regents' Inquiry into the Character and Cost of Public Education in the State of New York, 1939, viii, 106 (with Bernice E. Leary).

255. "The Professional Education of the College Teacher," *The Study of College Instruction*, 248-266. Twenty-Seventh Yearbook of the National Society of College Teachers of Education. Chicago: University of Chicago Press, 1939.

256. "Selected References on Elementary School Instruction. II. Reading," *Elementary School Journal*, XL (October, 1939), 132-137.

257. *Recent Trends in Reading*. Proceedings of the Conference on Reading, Chicago, Vol. I. Chicago: University of Chicago, 1939, x, 366 (Compiler and Editor).

258. "The Value and Place of Reading in General Education," *Recent Trends in Reading*, 3-8. Supplementary Educational Monographs, No. 49, November, 1939. Chicago: University of Chicago.

259. "Selected References on Teacher Education," *Elementary School Journal*, XL (December, 1939), 297-306.

260. "Summary of Reading Investigations July 1, 1938 to June 30, 1939," *Journal of Educational Research*, XXXIII (March, 1940), 481-523.

261. "Organization and Activities of the Committee on the Preparation of Teachers," *Zeta News*, XXV (March, 1940), 3-4. Chicago: Zeta Chapter, Phi Delta Kappa, University of Chicago.

262. "Growth of Interest and Appreciation in Reading," *Elementary English Review*, XVII (April, 1940), 139-143.

263. "Reading," *The Language Arts*, Review of Educational Research, X (April, 1940), 79-106, 154-160 (with the cooperation of Luella Cole, Arthur I. Gates, Ruth Strang, Arthur E. Traxler, and Paul Witty).

264. Review of *Teachers for Democracy*, by George E. Axtell and others. *Chicago Schools Journal*, XXI (May-June, 1940), 302-303.

265. *Reading in General Education: An Exploratory Study*. Washington, D.C.: American Council on Education, 1940, xiii, 464.

266. "Reading and Factors Influencing Reading Efficiency," *Reading in General Education*, 18-44. Washington, D.C.: American Council on Education, 1940.

267. "Reading Problems in Content Fields," *Reading in General Education*, 113-185. Washington, D.C.: American Council on Education, 1940 (with Bernice E. Leary, senior author).

268. "The Study of Reading in General Education," *Official Report of 1940 Meeting*, 139-141. American Research Association. Washington, D.C.: American Education Research Association, 1940.

269. "Recent Development in Improving the Interpretation of What is Read," *Addresses and Proceedings of the National Education Association*, LXXVIII (1940), 128-129. (abstract)

270. "What is Being Done to Meet the Current Concern Over Reading?" *Enriching the Elementary School Curriculum*, 61-67. Fourth Annual Conference on Elementary Education, Madison, Wisconsin (July 1940). Madison, Wisconsin: University of Wisconsin (with Bernice Leary).

271. "Contributions of Research to an Enriched Curriculum through the Language Arts," *Enriching the Elementary School Curriculum*, 147. Fourth Annual Conference on Elementary Education, Madison, Wisconsin. (July, 1940), Madison, Wisconsin: University of Wisconsin.

272. Review of *How to Increase Reading Ability: A Guide to Diagnostic and Remedial Methods*, by Albert J. Harris. *Elementary School Journal*, XLI (September, 1940), 69-71.

273. *Reading and Pupil Development*. Proceedings of the Conference on Reading held at the University of Chicago, Vol. II. Chicago: University of Chicago, 1940, xii, 356 (Compiler and Editor).

274. "Theme of the Conference," *Reading and Pupil Development*, 1-7. Supplementary Educational Monographs, Number 51, October, 1940. Chicago: University of Chicago.

275. "Needed Emphases in the Teaching of Reading to Prepare for Intelligent Participation in Democracy," *National Elementary Principal*, XX (October, 1940), 7-9.

276. "Selected References on Elementary-School Instruction. II: Reading," *Elementary School Journal*, XLI (October, 1940), 134-138.

277. "Selected References on Teacher Education," *Elementary School Journal*, XLI (December, 1940), 298-306.

278. "Trends in American Reading Instruction," *The Teacher, The Pupil, and the Reading Program*, 1-4. Annual Conference of New York English and Reading Teachers, Syracuse University, 1940.

279. Personal Bibliography 1929-1939. *Eleven Twenty-Six: Decade of Social Science Research* (Edited by Louis Wirth), 336-337. Chicago: University of Chicago Press, 1940.

280. "Implications of 'Reading in General Education' for the Improvement of Reading in High Schools and Colleges," *English Journal*, XXX (February, 1941), 20-21.

281. "Summary of Reading Investigations July 1, 1939 to June 30, 1940," *Journal of Educational Research*, XXXIV (February, 1941), 401-443.

282. "Reading and Child Growth in the Primary Grades," *School Briefs*, IV (March, 1941), 2.

283. "Educational News and Editorial Comment," *Elementary School Journal*, XLI (April, 1941), 561-575.

284. "Reading," *The American Educator Encyclopedia* (1941), 3014-3028. Chicago: United Educators (with Bernice E. Leary).

285. "Foreword," *Illinois Pupils' Reading Circle*, 1940-1941, 2. Lincoln, Illinois: D.F. Nichols, Secretary-Manager.

286. "Reading," *Encyclopedia of Educational Research*, 891-926. New York: Macmillan, 1941.

287. *Adjusting Reading Programs to Individuals*. Proceedings of the Conference on Reading held at the University of Chicago, Vol. III. Chicago: University of Chicago, 1941, xii, 344 (Compiler and Editor).

288. "Theme of the Conference," *Adjusting Reading Programs to Individuals*, 1-6. Supplementary Educational Monographs, Number 52, October, 1941. Chicago: University of Chicago.

289. "Selected References on Elementary-School Instruction. II. Reading," *Elementary School Journal*, XLII (October, 1941), 130-134.

290. "Selected References on Teacher Education," *Elementary School Journal*, XLII (December, 1941), 297-305.

291. "Individualizing the Reading Program in the Intermediate Grades," *Roads to the Future*, 229-236. Twenty-Eighth Annual Schoolmen's Week Proceedings, Philadelphia: University of Pennsylvania Bulletin, School of Education, 1941.

292. "Recent Progress toward Professional Status in Teaching," *Administrative Adjustments Required by Socio-Economic Change*, 205-218. Tenth Annual Conference of Administrative Officers of Public and Private Schools. Chicago: University of Chicago Press, 1941.

293. *Report on Teacher Education by State-Supported Institutions in Illinois*. Administrative Survey of State Educational Policies and Administration conducted by the Department of Finance at the Direction of Governor Dwight H. Green and under the Supervision of Simeon E. Leland, University of Chicago, 1941-1942, 40 (distributed in typewritten form).

294. "A Message to Schools," *Primary Activities*, VI (January, 1942), 1.

295. "Summary of Reading Investigations July 1, 1940 to June 30, 1941," *Journal of Educational Research*, XXXV (February, 1942), 401-442.

296. "Some Contributions of Research to the Teaching of Reading," *Contributions of Research to the Teaching of Reading*. Bulletin of New York State Association of Elementary Principals, May, 1942, 7-15.

297. "Education of the Gifted Child: With Special Reference to Reading," Elementary School Journal, XLII (June, 1942), 736-744.

298. *Cooperative Effort in Schools to Improve Reading*. Proceedings of the Conference on Reading held at the University of Chicago, Vol. IV. Chicago: University of Chicago, 1942. xii, 338 (Compiler and Editor).

299. "Theme of the Conference," *Cooperative Effort in Schools to Improve Reading*, 1-7. Supplementary Educational Monographs, Number 56, September, 1942. Chicago: University of Chicago.

300. "Selected References on Elementary-School Instruction. II. Reading," *Elementary School Journal*, LIII (October, 1942), 109-112.

301. "What Shall We Do about Reading Today: A Symposium," *Elementary English Review*, XIX (November, 1942), 234-237. See also *Policies and Practices in the Improvement of Reading*, National Council of Teachers of English, 11-13.

302. "Selected References on Teacher Education," *Elementary School Journal*, XLIII (December, 1942), 242-247.

303. "Trends in Remedial Work," *Elementary English Review*, XX (February, 1943), 47-53. See also *Policies and Practices in the Improvement of Reading*, National Council of Teachers of English, 40-46.

304. "Summary of Reading Investigations July 1, 1941 to June 30, 1942," *Journal of Educational Research*, XXXVI (February, 1943), 401-444.

305. "The Place of Phonics in the Elementary School Program," *Illinois State Normal University Bulletin*, XLI (March, 1943), 19-20.

306. "Reading," *Survey of Elementary Schools*, The Boards of Education, Districts 107 and 108, Highland Park, Illinois, by Committee on Field Services, Department of Education, University of Chicago, April 1, 1943, 53-62.

307. "Basic Reading Instruction in Grades Four to Eight," *School Briefs*, VI (April, 1943), 2.

308. "Evaluating Pupil Progress in Reading," *Primary Activities*, VII (May, 1943), 1, 4.

309. "Educational News and Editorial Comment," *Elementary School Journal*, XLIII (May, 1943), 499-511.

310. "Social and Educational Changes Affecting the Library," *The Library in General Education*, 15-31. Forty-Second Yearbook of the National Society for the Study of Education, Part II, 1943.

311. "Preface" to *Indiana Teachers Look at Their Reading Problems*, by the Committee on Reading of the Indiana Council of Teachers of English, Mary Ethel Thurston, Chairman, xii-xiii. Research Bulletin Number 7, State of Indiana, Department of Public Instruction, 1943.

312. *Adapting Reading Programs to War-Time Needs*, Proceedings of the Conference on Reading held at the University of Chicago, Vol. VI. Chicago: University of Chicago, 1943, viii, 283.

313. "Selected References on Elementary-School Instruction. II. Reading," *Elementary School Journal*, XLIV (October, 1943), 105-108.

314. "Current Demands for the Improvement of Reading," *Adapting Reading Programs to Wartime Needs*, 1-7. Supplementary Educational Monographs, Number 57, December, 1943. Chicago: University of Chicago.

315. *Guidebook for the Citizens Service Corps*. Office of Civilian Defense, Jackson Park Community, Chicago, October, 1943, 23.

316. "Selected References on Teacher Education," *Elementary School Journal*, XLIV (December, 1943), 237-244.

317. "Summary of Reading Investigations July 1, 1942 to June 30, 1943," *Journal of Educational Research*, XXXVII (February, 1944), 401-440.

318. "What Makes for an Effective Basic Reading Program?" *Primary Activities*, VIII (April, 1944), 1.

319. "Interpreting What is Read: Two Levels of Difficulty," *School Briefs*, VII (April, 1944), 2.

320. "Educational News and Editorial Comment," *Elementary School Journal*, XLIV (May, 1944), 497-508.

321. "Steps in Attacking Reading Problems in High Schools," *Attacking Reading Problems in Secondary Schools*, by the Subcommittee on Reading of the Committee on Fundamentals, North Central Association of Secondary Schools and Colleges, 1944, 10-14.

322. "Selected References on Elementary-School Instruction: Reading," *Elementary School Journal*, XLV (October, 1944), 103-106.

323. "Selected References on Teacher Education," *Elementary School Journal*, XLV (December, 1944), 231-237.

324. "Theme of the Conference," *Reading in Relation to Experience and Language*, 1-6. Supplementary Educational Monographs, No. 58, December, 1944. Chicago: University of Chicago.

325. *Reading in Relation to Experience and Language*. Proceedings of the Conference on Reading held at the University of Chicago, Vol. VI. Chicago: University of Chicago, 1944, viii, 226 (Compiler and Editor).

326. Review of *Remedial Reading: Diagnosis and Correction of Reading Difficulties at the College Level*, by Frances Oralind Triggs. *Journal of Higher Education*, XV (December, 1944), 497.

327. "Reading in the Upper Grades," *School Briefs*, VIII (January, 1945), 2.

328. "The Language Arts Program: Elementary School," *Elementary Education*, Part II of Survey Report, Public School System, Battle Creek, Michigan. Committee on Field Services, Department of Education, University of Chicago, January, 1945, 1-60 (with Marion Edman and Gertrude Whipple).

329. "Summary of Reading Investigations July 1, 1943 to June 30, 1944," *Journal of Educational Research*, XXXVIII (February, 1945), 401-429.

330. Review of *Latin America in School and College Teaching Materials*, by American Council on Education. *United States Quarterly Book List*, I (March, 1945), 20.

331. "Educational News and Editorial Comment," *Elementary School Journal*, XLV (May, 1945), 481-493.

332. "Evaluation in Teacher Education," *Teachers College Record*, XVI (July, 1945), 130-131.

333. "The Challenge of the Future," *Alumni Quarterly*, Illinois State Normal University, XXXIV (August, 1945), 2-3, 12.

334. "Learning to Read and Reading to Learn," *School Briefs*, X (September, 1945), 2.

335. Review of *Children's Interests in Library Books of Fiction*, by Marie Rankin. *The United States Quarterly Book List*, I (September, 1945), 27-28.

336. "Selected References on Elementary-School Instruction: Reading," *Elementary School Journal*, XLVI (October, 1945), 101-104.

337. "Selected References on Teacher Education," *Elementary School Journal*, XLVI (December, 1945), 228-233.

338. Review of *Dictionary of Education*, Carter Victor Good (Ed.), *The United States Quarterly Book List*, I (December, 1945), 69.

339. "Criteria for Appraising the Scope and Organization of Reading Programs in Elementary and Secondary Schools," *The Appraisal of Current Practices in Reading*, 15-22. Supplementary Educational Monographs, No. 61, December, 1945. Chicago: University of Chicago Press.

340. "Criteria for Appraising Efforts to Promote Growth in the Interpretation of What is Read," *The Appraisal of Current Practices in Reading*, 150-155. Supplementary Educational Monographs, No. 61, December, 1945. Chicago: University of Chicago Press.

341. *The Appraisal of Current Practices in Reading*. Proceedings of the Annual Conference on Reading held at the University of Chicago, Vol. VII. Supplementary Educational Monographs, No. 61. Chicago: University of Chicago Press, 1945, viii, 256 (Compiler and Editor).

342. "The Language Arts Program," *Survey of Elementary Schools, District No. 97, Oak Park, Illinois*, 192-236. Oak Park, Illinois: Board of Education, January, 1946 (with Marion Edman).

343. "Reading Builds Civilization," *NEA Journal*, XXXV (February, 1946), 78-79.

344. "Summary of Reading Investigations July 1, 1944 to June 30, 1945," *Journal of Educational Research*, XXXIX (February, 1946), 401-433.

345. Review of *Helping Teachers Understand Children*, by American Council on Education. *The United States Quarterly Book List*, II (March, 1946), 39.

346. "The Measurement of Understanding in the Language Arts," *The Measurement of Understanding*, 175-200. Forty-Fifth Yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, March, 1946 (with Harry A. Greene).

347. "Education for Responsible Citizenship," *Annual Report and Proceedings of the Eighty-Sixth Annual Convention of the Ontario Educational Association*, Toronto, April, 1946.

348. "Educational News and Editorial Comment," *Elementary School Journal*, XLVI (May, 1946), 473-486.

349. "For Better Interpretation in Reading," *School Briefs*, IX (May, 1946), 2.

350. Review of *State Programs for the Improvement of Teacher Education*, by Charles Edward Prall, for the American Council on Education. *The United States Quarterly Book List*, II (June, 1946), 114.

351. "Preface," *Claremont College Reading Conference*, Eleventh Yearbook, June, 1946, 7-9.

352. "Preface," *Why Pupils Fail in Reading*, by Helen Mansfield Robinson. Chicago: University of Chicago Press, 1946, v-viii.

353. Review of *Henry Bernard's American Journal of Education*, by Richard Emmons Thursfield. *The United States Quarterly Book List*, II (September, 1946), 211-212.

354. "Selected References on Elementary-School Instruction: Reading," *Elementary School Journal*, XLVII (October, 1946), 103-106.

355. Review of *Changing the Curriculum: A Social Process*, by Alice Miel. *The United States Quarterly Book List*, II (December, 1946), 310.

356. "Selected References on Teacher Education," *Elementary School Journal*, XLVII (December, 1946), 229-235.

357. *Improving Reading in Content Fields*. Supplementary Educational Monographs, No. 62. Chicago: University of Chicago Press, January 1947, viii, 240.

358. "Nature and Role of Wide Reading in Content Fields," *Improving Reading in Content Fields*, 169-172. Supplementary Educational Monographs, No. 62. Chicago: University of Chicago Press, 1947.

359. Review of *Controlled Eye Movements versus Practice Exercises in Reading*, by Frederick Lowell Westover. *The Educational Forum*, XI (January, 1947), 251-252.

360. "Summary of Reading Investigations July 1, 1945 to June 30, 1946," *Journal of Educational Research*, XL (February, 1947), 401-435.

361. "The Teaching of Word Recognition," *Advances in the Teaching of Reading*, 3-9. Report of the Fifth Annual Meeting of the Metropolitan Detroit Reading Conference, February, 1947.

362. *Future Plans Commission*. Chicago. Hyde Park Baptist Church, April 30, 1947, 28. (Mimeographed)

363. "Educational News and Editorial Comment," *Elementary School Journal*, XLVII (May, 1947), 477-490.

364. "Progress in the Study of Readability," *Elementary School Journal*, XLVII (May, 1947), 491-499.

365. "The Social Effects of Reading," *The School Review*, LV (May, 1947), 269-277.

366. *Promoting Personal and Social Development through Reading*. Chicago: University of Chicago Press, October, 1947, viii, 236 (Compiler and Editor).

367. "Promoting World Citizenship through an Improved Reading Program," *North Central Association Quarterly*, XXII (October, 1947), 208-213.

368. "Selected References on Elementary-School Instruction. II. The Subject Fields. Reading," *Elementary School Journal*, XLVIII (October, 1947), 97-100.

369. "Selected References on Teacher Education," *Elementary School Journal*, XLVIII (December, 1947), 222-227.

370. "Summary of Reading Investigations July 1, 1946 to June 30, 1947," *Journal of Educational Research*, XLI (February, 1948), 401-435.

371. Review of *How to Increase Reading Ability* by Albert J. Harris. *Educational Forum*, XII (March, 1948), 369-370.

372. "How Printed Words Are Identified," *Journal of Education of the Missouri Teachers Association*, V (April, 1948), 5-6; *Georgia Education Journal*, XLI (May, 1948), 12-13; *The Kansas Teacher*, LVI (May, 1948), 16-17; *Mississippi Educational Advance*, XXXIX (May, 1948), 25-27; *Montana Education*, XXIV (May, 1948), 24-25; *SDEA Journal*, XXIII (May, 1948), 372-373; *Vermont School Journal*, XIV (May, 1948), 38-40.

373. "Educational News and Editorial Comment," *Elementary School Journal*, XLVIII (May, 1948), 463-475.

374. *Reading in the High School and College*. Chicago: University of Chicago Press, 1948, x, 316.

375. "Advantages of Co-ordinating Reading Research in the Social Sciences," *Improving Educational Research*, 1948 Official Report, American Educational Research Association, 14-19.

376. "How the Child Learns to Read," *The Saskatchewan Bulletin*, XIV (September, 1948), 16-17.

377. "How Printed Words Are Identified," *Alabama School Journal*, LXVI (September, 1948), 11, 13.

378. "Reading and the Language Arts," *Report of the Directed Self Survey, Winnipeg Public Schools*, Chapter X. Committee on Field Services, Department of Education, University of Chicago. Winnipeg, Canada: Board of Education, September, 1948.

379. "Selected References on Elementary-School Instruction," *Elementary School Journal*, XLIX (October, 1948), 103-106.

380. "How Printed Words Are Identified," *Arizona Teacher-Parent*, XXXVII (Fall, 1948), 15, 41.

381. Review of *Making the American Mind: Social and Moral Ideas in the McGuffey Readers*, by Richard D. Mosier. *International Journal of Opinion and Attitude Research*, II (Fall, 1948), 418-420.

382. "Reading in High School and College," *Chicago Schools Journal*, XXX (November-December, 1948), 81-84.

383. "Selected References on Teacher Education," *Elementary School Journal*, XLIX (December, 1948), 236-243.

384. *Basic Instruction in Reading in Elementary and High Schools*. Proceedings of the Conference on Reading held at the University of Chicago, Vol. X. Supplementary Educational Monographs, No. 65. Chicago: University of Chicago Press, 1948, vii, 237 (Compiler and Editor).

385. "Understandings, Attitudes, and Skills in Recognizing Word Meanings and Pronunciations," *Basic Instruction in Reading in Elementary and High Schools*, 117-121. Supplementary Educational Monographs, No. 65. Chicago: University of Chicago Press, 1948.

386. "Changing Conceptions of Basic Instruction in Reading," *Basic Instruction in Reading in Elementary and High Schools*, 1-6. Supplementary Educational Monographs, No. 65. Chicago: University of Chicago Press, 1948.

387. Review of *Fundamental Education: Common Ground for All Peoples*. Report of a Special Committee to the Preparatory Commission of UNESCO. *Adult Education Journal*, VIII (January, 1949), 43-44.

388. "Summary of Reading Investigations July 1, 1947 to June 30, 1948," *Journal of Educational Research*, XLII (February, 1949), 401-437.

389. "Gates Primary Reading Tests: Grades 1 and (First Half) Grade 2," *The Third Mental Measurements Yearbook* (Oscar Krisen Buros, editor), 512-513. New Brunswick, New Jersey: Rutgers University Press, 1949.

390. "Primary Reading: Grades Two and Three," *The Third Mental Measurements Yearbook* (Oscar Krisen Buros, editor), 522-523. New Brunswick, New Jersey: Rutgers University Press, 1949.

391. "Comparative Study of Achievement in Reading in 1916 and 1949," *Grand Rapids School Survey, Grand Rapids, Michigan*, chapter XI. Committee on Field Services, Department of Education, University of Chicago. Grand Rapids, Michigan: Board of Education, June 1, 1949.

392. "Reading as an Aid to Learning," *Reading in the Elementary School*, 233-253. Forty-Eighth Yearbook of the National Society for the Study of Education, Part II. University of Chicago Press, 1949.

393. *Reading in an Age of Mass Communication*. New York: Appleton-Century-Crofts, 1949, xiii, 108.

394. "Changes in the Teaching of Reading," *Saskatchewan Bulletin*, XV (September, 1949), 34-37; 62-63.

395. "Changes in the Teaching of Reading," *School and Community*, XXXV (September, 1949), 262-265, 267.

396. *Classroom Techniques in Improving Reading*. Supplementary Educational Monographs, No. 69. Chicago: University of Chicago Press, October, 1949, viii, 246.

397. "Edward L. Thorndike, 1874-1949," *School Briefs, A Service Bulletin for School Executives*, XIII (October, 1949), 3.

398. "Group Versus Individual Instruction in Promoting Growth in Interpretation," *Classroom Techniques in Improving Reading*, 23-28. Supplementary Educational Monographs, No. 69. Chicago: University of Chicago Press, October, 1949.

399. "Selected References on Elementary School Instruction, II. The Subject Fields." *Elementary School Journal*, L (October, 1949), 99-102.

400. "Four Questions on Reading," *Journal of Arkansas Education*, XXIII (November, 1949), 17, 38.

401. "Selected References on Teacher Education," *Elementary School Journal*, L (December, 1949), 234-240.

402. "Four Questions on Reading," *Midland Schools*, LXIV (January, 1950), 6-8.

403. Review of *Teaching Children to Read*, by Fay Adams, Lillian Gray and Dora Reese. *Educational Forum*, XIV (January, 1950), 239-240.

404. "Summary of Reading Investigations July 1, 1948 to June 30, 1949," *Journal of Educational Research*, XLIII (February, 1950), 401-439.

405. "Educational News and Editorial Comment," *Elementary School Journal*, L (May, 1950), 486-495.

406. "Implications of Research for the Improvement of Reading," *Education*, LXX (May, 1950), 539-547.

407. "Reading Efficiency," *Handbook of Applied Psychology* (edited by Douglas H. Pryer and Edwin R. Henry), I, 49-54. New York: Rinehart, 1950.

408. "Reading," *Encyclopedia of Educational Research* (second edition, 1950), 965-1005.

409. *Keeping Reading Programs Abreast of the Times*. Supplementary Educational Monographs, No. 74. Chicago: University of Chicago Press, October, 1950, III - 247.

410. *Methods and Techniques of Teaching Reading*. Ministry of Education, Egypt, Institute of Education, Cairo, Egypt: Government Press, 1950, iv-79 (printed in Arabic and English).

411. "The Preparation of Teachers," Survey Report, Milwaukee-Downer College, August, 1950, 50-55 (with Harold A. Anderson).

412. "Alma Mater Unlimited," *Alumni Quarterly*, XXXIX (September, 1950), 6-9.

413. "Selected References on Elementary-School Instruction – Reading," *Elementary School Journal*, LI (October, 1950), 93-96.

414. "Reading Can Challenge the Child," *Kansas Teacher*, LIX (November, 1950), 15-17.

415. "Selected References on Teacher Education," *Elementary School Journal*, LI (December, 1950), 225-232.

416. "Four Questions on Reading," *Revista de la Asociación de Maestros*, IX (December, 1950), 232, 243.

417. "Reading – More Important than Ever," *Junior Briefs*, XIV (January-February, 1951), 2.

418. "Summary of Reading Investigations July 1, 1949 to June 30, 1950," *Journal of Educational Research*, XLIV (February, 1951), 401-441.

419. "Reading and Understanding," *Elementary English Review*, XXVIII (March, 1951), 148-159.

420. "Foundation Stones in the Road to Better Reading," *Elementary School Journal*, LI (April, 1951), 427-435.

421. "Educational News and Editorial Comment," *Elementary School Journal*, LI (May, 1951), 475-489.

422. "Improved Reading Programs," *Education*, LXXI (May, 1951), 535-540.

423. "Developing Word Recognition," *Bulletin*, IV (May, 1951), 1, 11-12.

424. "Reading As Experiencing," *School Briefs*, XIV (May-June, 1951), 2.

425. "Foreword," *Growth into Reading* (by Marion Monroe), vii-viii. Chicago: Scott, Foresman and Company, 1951.

426. *Promoting Growth toward Maturity in Interpreting What Is Read*. Supplementary Educational Monographs, No. 74. Chicago: University of Chicago Press, November, 1951, iii, 264 (Compiler and Editor).

427. "How Research Has Expanded Our Understanding of Reading," *Nations' Schools*, XLVIII (August, 1951), 25-27.

428. "Improved Reading Programs," *Education Digest*, XVII (September, 1951), 15-18.

429. "Selected References on Elementary-School Instruction, II. The Subject Field Reading," *Elementary School Journal*, LXI (October, 1951), 100-104.

430. "Reading in High Schools," *Report by the Chicago Board of Education*, November 27, 1951, 1-9 (mimeo).

431. "Reading As Experiencing," *Promoting Growth toward Maturity in Interpreting What Is Read*. Supplementary Educational Monographs, No. 74. Chicago: University of Chicago Press, November, 1951, 58-62.

432. "Selected References on Teacher Education," *Elementary School Journal*, LII (December, 1951), 229-237 (with Kenneth D. Norberg).

433. "Foundation Stones in the Road to Better Reading," *Tensions in the Modern Elementary School*, Proceedings of the Eleventh National Conference, Department of Elementary School Principals, 1951, 54-58. (mimeo)

434. "Needed Research on Textbooks," *Phi Delta Kappan*, XXXIII (January, 1952), 297-298.

435. "What is the Evidence Concerning Reading?" *Progressive Education*, XXIX (January, 1952), 105-110.

436. "Needed Research in Reading," *Elementary English*, XXIX (February, 1952), 100-109.

437. "Summary of Reading Investigations July 1, 1950 to June 30, 1951," *Journal of Educational Research*, XLV (February, 1952), 401-437.

438. "Reading as Experience," *Middle-Grade Activities*, XVII (February-March, 1952), 1-2.

439. "The Nature of Meaning and Factors Influencing Its Development," *Proceedings of Thirty-Fourth Annual Education Conference*, School of Education, University of Delaware, III (March, 1952), 10-20.

440. "Current Practices in Improving Comprehension," *Proceedings of Thirty-Fourth Annual Education Conference*, School of Education, University of Delaware, III (March, 1952), 36-45.

441. "Promoting Development in Reading among All Pupils," *Education in a Period of National Preparedness*, American Council on Education Studies, XVI (April, 1952), 111-116.

442. "How Can the Poor Reader in the Secondary School Be Rescued?" *Bulletin of the National Association of Secondary-School Principals*, XXXVI (April, 1952), 139-142.

443. Educational News and Editorial Comment. "Is Reading Being Neglected?" *Elementary School Journal*, LII (May, 1952), 491-503.

444. "Improving Reading: An Appraisal and Challenge," *School Briefs*, XV (May-June, 1952), 2.

445. "How Personal Reading Contributes to the Development of Children," *A Report of the Eighth Annual Conference on Reading*, University of Pittsburgh Press, Pittsburgh, Pennsylvania (July, 1952), 82-93.

446. "Why the Nation-Wide Concern about Reading?" *Education for Today's Children*, Proceedings of the Twelfth Annual Conference, Department of Elementary School Principals, National Education Association (July, 1952), 9-11.

447. "What Should Be the Profession's Attitude toward Lay Criticism of the Schools? With Special Reference to Reading," *Elementary School Journal*, LIII (September, 1952), 1-44.

448. "Selected Reference on Elementary School Instruction – Reading," *Elementary School Journal*, LIII (October, 1952), 100-104.

449. "Progress Achieved and the Tasks Faced in Improving Reading in Various Curriculum Areas," *Improving Reading in All Curriculum Areas*, Supplementary Educational Monographs, No. 76. Chicago: University of Chicago Press, 6-11.

450. "How Well Do Pupils Read?" *Education Digest*, XVIII (November, 1952), 38-40.

451. *Improving Reading in All Curriculum Areas*. Supplementary Educational Monographs, No. 76. Chicago: University of Chicago Press, November, 1952, iii-262.

452. "Selected References on Teacher Education," *Elementary School Journal*, LIII (December, 1952), 232-240.

453. Book Review, *The Art of Book Reading*, by Stella S. Center, *Elementary English*, XXX (January, 1953), 50-51.

454. "Summary of Reading Investigations July 1, 1951 to June 30, 1952," *Journal of Educational Research*, XLVI (February, 1953), 401-437.

455. "The Road to Better Reading," based on the Summary of Conference Clinics for the Readjustment of High School Education, Bureau of Secondary Curriculum Development, State Education Department, Albany, 1953, 3-8.

456. Critical review of "Haggerty Reading Examination, Sigma I, Sigma 3," the *Fourth Mental Measurements Yearbook*, 535. Highland Park, New Jersey: Gryphon Press, 1953.

457. Critical review of "The Harrison-Stroud Reading Readiness Tests," the *Fourth Mental Measurements Yearbook*, 568. Highland Park, New Jersey: Gryphon Press, 1953.

458. *Preliminary Survey on Methods of Teaching Reading and Writing*, Part I. Paris. Education Clearing House, Educational Studies and Documents, July, 1953, 66.

459. *Preliminary Survey on Methods of Teaching Reading and Writing*, Part II. Paris. Education Clearing House, Educational Studies and Documents, July, 1953, 72.

460. *Les methodes d'enseignement de la lecture et de l'ecriture*. Etude preliminaire, Partie II. Paris. Centre d'information du Department de l'education Etudes et documents d'education, Octobre, 1953, 78.

461. "Selected References on Elementary School Instruction. II. The Subject Fields," *Elementary School Journal*, LIV (October, 1953), 101-105.

462. *Les methodes d'enseignement de la lecture et de l'ecriture*. Etude preliminaire, Premiere Partie. Paris. Centre d'information du Department de l'education Etudes et documents d'education, Novembre, 1953, 72.

463. "World-Wide Trends in Methods of Teaching Reading to Children and Adults," *Reading Teacher*, VII (December, 1953), 89-95.

464. "The Teaching of Reading: The Current UNESCO Study," *Supplementary Educational Monographs*, No. 79, 1-10. University of Chicago Press, December, 1953.

465. "Summary of Reading Investigations July 1, 1952 to June 30, 1953," *Journal of Educational Research*, XLVIII (February, 1954), 401-439.

466. "Taking a Curriculum-Wide View of Reading in the Middle Grades," *School Briefs*, XVIII (March-April, 1954), 2.

467. "A Curriculum-Wide View of Reading," *Middle-Grade Activities*, XIX (April-May, 1954), 1, 4.

468. "Relation of Basic Instruction in Reading to the Total Reading Program," *Education*, LXXIV (May, 1954), 535-543.

469. "Reading: Selected References on Elementary-School Instruction," *Elementary School Journal*, LV (October, 1954), 104-117.

470. "Nature of Mature Reading," *Supplementary Educational Monographs*, No. 81, 11-15. University of Chicago Press, December, 1954.

471. "Summary of Reading Investigations July 1, 1953 to June 30, 1954," *Journal of Educational Research*, XLVIII (February, 1955), 401-442.

472. "Basic Instruction in Reading in the Middle Grades," *Forty-Second Annual Schoolmen's Week Proceedings*, April 20-22, 1955, 16-24. University of Pennsylvania Bulletin, 1955.

473. "A Tribute," *William Claude Reavis 1881-1955*. Department of Education, University of Chicago, 1955.

474. *The Teaching of Reading and Writing: An International Survey*, Monographs on Fundamental Education, X, UNESCO, Paris, 1956. Distributed in the United States by Scott, Foresman, Chicago.

475. "Current Reading Problems: A World View," *Elementary School Journal*, LVI (September, 1955), 11-17.

476. "How Can We Make This Our Best Year Yet in Reading?" *School Briefs*, Vol. XX (September-October, 1955), 1.

477. "Phonic Versus Other Methods of Teaching Reading," *Reading Teacher*, IX (December, 1955), 102-106.

478. "Characteristics of Effective Oral Reading," *Supplementary Educational Monographs*, No. 82, University of Chicago Press, December, 1955, 5-10.

479. "Current Reading Problems: A World View," *Meeting the Reading Problems of Today's Classrooms*, 26-32. Proceedings of the First Annual Reading Conference at Cornell University, 1955.

480. "Summary of Reading Investigations July 1, 1954 to June 30, 1955," *Journal of Educational Research*, XLIX (February, 1956), 401-435.

481. "How Well Do Adults Read?" *Adult Reading* (David H. Clift, Chairman), 29-56. Fifty-Fifth Yearbook of the National Society for the Study of Education. University of Chicago Press, 1956.

482. "Reading Problems that Merit International Study," *Report of the First International Conference on Educational Research*, Atlantic City, New Jersey, February, 1956. *Educational Studies and Documents*, XX, Paris: UNESCO, 41-47.

483. *Better Readers for Our Times*, Proceedings of the International Reading Association, I, 1956. New York: Scholastic Magazines. (Edited with Nancy Larrick.)

484. "Sociological Aspects," *Developing Permanent Interests in Reading*, 10-15. Supplementary Educational Monographs, No. 84. University of Chicago Press, 1956.

485. "Reading Attitudes and Skills Needed for Our Times," *Educational Conference: Group Reports and Evaluations*, 1-12. American Federation of Teachers, Local 4, Gary, Indiana, October 26, 1956.

486. *Maturity in Reading: Its Nature and Appraisal*. Chicago: University of Chicago Press, 1956 (with Bernice Rogers).

487. *The Teaching of Reading: An International View*. Cambridge, Massachusetts: Harvard University Press, 1957.

488. "Summary of Reading Investigations July 1, 1955 to June 30, 1956," *Journal of Educational Research*, L (February, 1957), 401-441.

489. "Reading As Experiencing," *English High Lights*, XIV (May-June, 1957).

490. "Laying the Foundation for Word Perception," in Nancy Larrick (Ed.), *Reading in Action*, Proceedings of the International Reading Association, II, 83-85. New York: Scholastic Magazines, 1957.

491. Review of *How To Increase Reading Ability* by Albert J. Harris. *Library Quarterly*, XXVII (April, 1957), 133-134.

492. "What's Happening in Reading?" *Reading Teacher*, XI (October, 1957), 3-8.

493. "Frontiers in Preparing Teachers of Reading," *Frontiers in Teacher Education*, 49-56. Normal, Illinois: Illinois State Normal University, October, 1957.

494. "Is Yours An Effective Reading Program? Reading in the School of Tomorrow," *Kent State University Bulletin*, XLV (November, 1957), 27-41.

495. "Role of Group and Individualized Teaching in a Sound Reading Program," *Reading Teacher*, XI (December, 1957), 99-104.

496. "Reading Materials Needed for the Current Curriculum," *Supplementary Educational Monographs*, No. 86. Chicago: University of Chicago Press, 1957, 12-18.

497. "Summary of Reading Investigations July 1, 1956 to June 30, 1957," *Journal of Educational Research*, LI (February, 1958), 401-435.

498. "Teaching Reading in English-Speaking Countries: In Great Britain," in J. Allen Figurel (Ed.), *Reading for Effective Living*, Proceedings of the International Reading Association, III, 158-160. New York: Scholastic Magazines, 1958.

499. "Is Yours an Effective Reading Program?" *University of Kansas Bulletin of Education*, University of Kansas Publications, School of Education, Lawrence, Kansas, Vol. XII (February, 1958), 41-50.

500. "The Role of Group and Individual Instruction in Reading," *Meeting Individual Needs through Reading*, Third Annual Reading Conference, Sacramento State College Council, International Reading Association, March, 1958.

501. "New Approaches to the Study of Interpretation in Reading," *Journal of Educational Research*, LII (October, 1958), 65-67.

502. "Nature of Reading and the Basic Attitudes and Skills Involved," *Educational Conference Report*, (November, 1958), 29-49. Brigham City, Utah: Bureau of Indian Affairs, Department of the Interior.

503. "Promoting Reading Growth among Children at Progressively Higher Levels," *Educational Conference Report*, (November, 1958), 11-28. Brigham City, Utah: Bureau of Indian Affairs, Department of the Interior.

504. "Promoting Growth among Adults to the Level of Functioning Literacy," *Educational Conference Report*, (November, 1958), 77-89. Brigham City, Utah: Bureau of Indian Affairs, Department of the Interior.

505. "Research in Reading Marches On," *Reading Teacher*, XII (December, 1958), 74-82.

506. "Objectives of the New Reading Program," *Evaluation in Reading* (1958), 9-14. Supplementary Educational Monographs, No. 88.

507. "Reading As Experiencing, Thinking and Learning," *California Journal of Elementary Education*, XXVII, (February, 1958), 135-149.

508. "Summary of Investigations Relating to Reading July 1, 1957 to June 30, 1958," *Journal of Educational Research*, III (February, 1959), 203-221.

509. "Status of Illiteracy at Mid-Century," *Proceedings of the Conference on World Literacy by Television*, Memphis, Tennessee (1959), 122-146.

510. "Kindergartners Need Stimulating Experiences," *My Weekly Reader Surprise* (March 26, 1959), 1.

511. "Reading Changes with the Times," *California Elementary Administration*, XXII (May, 1959), 19-24.

512. "World Literacy: Its Status and Problems," *Community Education*, Fifty-Eighth Yearbook of the National Society for the Study of Education (1959), 122-146.

513. Review of *Helping Your Child Read Better* by R.M. Goldensen, *Southern Speech Journal*.

The references which are listed above – those which are numbered 1 through 513 – are those which are listed within the set of Gray's personal bibliographic cards now housed within the University of Chicago Library. That set of cards was used to compile this bibliography. The references which are listed below – those numbered 514 through 519 – are other works which were authored by Gray but were not noted within his personal set of cards. All but one of these last works were published posthumously.

514. *On Their Own in Reading: How to Give Children Independence in Attacking New Words*. Chicago: Scott, Foresman, 1948.

515. *On Their Own in Reading: How to Give Children Independence in Analyzing New Words*. Chicago: Scott, Foresman, 1960.

516. "The Major Aspects of Reading," in Helen M. Robinson (Ed.), *Sequential Development of Reading Abilities*, Supplementary Educational Monographs, No. 90. Chicago: University of Chicago Press, 1960.

517. "Reading," *Encyclopedia of Educational Research*, third edition. 1960, 1086-1135.

518. "The Role of Teacher Education." *Development in and through Reading*, Sixtieth Yearbook of the National Society for the Study of Education, Part 1. University of Chicago Press, 1961, 144-161.

519. *Gray Oral Reading Tests*. Indianapolis: Bobbs-Merrill, 1963. (New, Austin: PRO-ED) (Editor, with Helen M. Robinson).

Summaries of Reading Investigations, 1925-1959

Appearing in the *Elementary School Journal*

26, February/March/April/May, 1926. (*See also* entry 69 in bibliography.)
27, February/March, 1927. (*See also* entry 76.)
28, February/March/April, 1928. (*See also* entry 85.)
29, February/March, 1929. (*See also* entry 94.)
30, February/March, 1930. (*See also* entry 102.)
31, March/April, 1931. (*See also* entry 119.)
32, February/March/April, 1932. (*See also* entry 137.)

Appearing in the *Journal of Educational Research*

26, February, 1933. (*See also* entry 156.)
27, April, 1934. (*See also* entry 172.)
28, February, 1935. (*See also* entry 191.)
29, February, 1936. (*See also* entry 202.)
30, April, 1937. (*See also* entry 216.)
31, February, 1938. (*See also* entry 232.)
32, March, 1939. (*See also* entry 249.)
33, March, 1940. (*See also* entry 260.)
34, February, 1941. (*See also* entry 281.)
35, February, 1942. (*See also* entry 295.)
36, February, 1943. (*See also* entry 304.)
37, February, 1944. (*See also* entry 317.)
38, February, 1945. (*See also* entry 329.)
39, February, 1946. (*See also* entry 344.)
40, February, 1947. (*See also* entry 360.)
41, February, 1948. (*See also* entry 370.)
42, February, 1949. (*See also* entry 388.)
43, February, 1950. (*See also* entry 404.)
44, February, 1951. (*See also* entry 418.)
45, February, 1952. (*See also* entry 437.)
46, February, 1953. (*See also* entry 454.)
47, February, 1954. (*See also* entry 465.)
48, February, 1955. (*See also* entry 471.)
49, February, 1956. (*See also* entry 480.)
50, February, 1957. (*See also* entry 488.)
51, February, 1958. (*See also* entry 497.)

Instructional Materials

Reading Materials

Elson Basic Readers. Elson, William H., Gray, William S., and others. Chicago: Scott, Foresman, 1930, 1931, 1934.

The readers in this series included Pre-Primers through Book 6. Book titles included *Dick and Jane* (first pre-primer) and *More Dick and Jane Stories* (second pre-primer).

Elson-Gray Basic Readers. Elson, William H., Gray, William S., and others. Chicago: Scott, Foresman, 1936-1938.

This reading series was a revision of the *Elson Basic Readers*. It included the first prereading book, *Before We Read*.

Basic Readers. Gray, William S., Arbuthnot, May Hill, and others. Chicago: Scott, Foresman, 1940-1948.

Readers for Pre-Primer through Book 6 were published in 1940-1944 and Books 7 and 8 were added in 1946-1948. Titles in this series included: *Before We Read; We Look and See; We Work and Play; We Come and Go; Fun with Dick and Jane; Our New Friends; Friends and Neighbors; Times and Places; Days and Deeds; People and Progress; Paths and Pathfinders; Wonders and Workers*.

Cathedral Basic Readers. O'Brien, John A. Chicago: Scott, Foresman, 1942-1947.

This series was a revision of the *Basic Readers* (see previous citation), which had been authored by William S. Gray and others. This revision by John O'Brien was one specifically designed for parochial schools.

New Basic Readers. Gray, William S., Arbuthnot, May Hill, Artley, A. Steryl, Monroe, Marion, and others. Chicago: Scott, Foresman, 1951-1957.

This was the third complete revision of the "Elsons." Readers authored by William H. Elson were first published in 1909 as the *Elson Grammar School Readers*. This series was one of the forerunners of the *Elson Basic Readers* first published in 1930, of which William S. Gray was an author (see previous citation). This third complete revision included books for prereading through grade eight.

New Cathedral Basic Readers. O'Brien, John A. Chicago: Scott, Foresman, 1952-1957.

This series was a revision of the *New Basic Readers* (see previous citation), which had been authored by William S. Gray and others. This revision by John O'Brien was another one specifically designed for parochial schools.

Other Materials

Art Stories, Books 1, 2, 3. Whitford, William G., Liek, Edna B., and Gray, William S. Chicago: Scott, Foresman, 1933-1935.

Health Stories, Books 1, 2. Towse, Anna B., Matthews, Florence E., and Gray, William S. Chicago: Scott, Foresman, 1933-1935.

Number Stories, Books 1, 2, 3. Studebaker, J.W., Findley, W.C., Knight, F.D., and Gray, W.S. Chicago: Scott, Foresman, 1932-1947.

Science Stories, Books 1, 2. Beauchamp, Wilber L., Crampton, Gertrude, Gray, William S., and Fogg, Harriet. Chicago: Scott, Foresman, 1933-1936.

Cover design by Larry Husfelt

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